BLM LIBRARY
88064885

OFFICE COPY
DO NOT REMOVE

Rio Blanco Oil Shale Company, Incorporated

MODULAR DEVELOPMENT PHASE
MONITORING REPORT FIFTEEN

January – December 1985

Year End Report

A DIVISION OF AMOCO CORPORATION
4380 South Syracuse Street, Denver, Colorado 80237

80064885

BLM Library
D-553A, Building 50
Denver Federal Center
P. O. Box 25047
Denver, CO 80225-0047

TN
859
.C64
R56
Jan-Dec85
c.3

RIO BLANCO OIL SHALE COMPANY
MODULAR DEVELOPMENT PHASE
MONITORING REPORT 15

January - December 1985
YEAR-END REPORT

Prepared by:
RIO BLANCO OIL SHALE COMPANY
AURORA, COLORADO

April 30, 1986

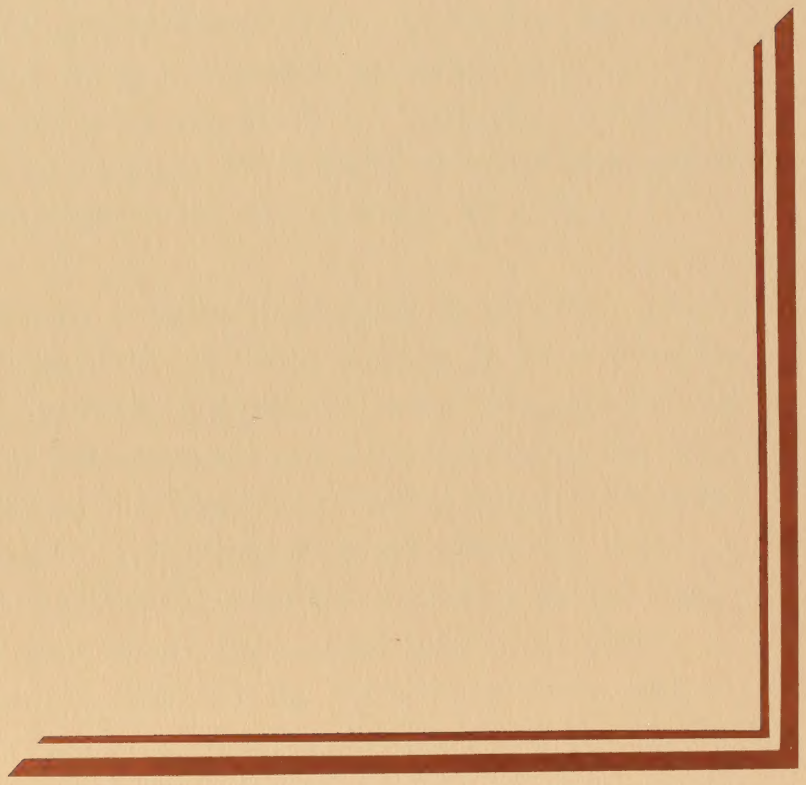
BLM Library
D-553A, Building 50
Denver Federal Center
P. O. Box 25047
Denver, CO 80225-0047

TABLE OF CONTENTS

Section	Title	Page
1	INTRODUCTION.....	1-1
2	ATMOSPHERIC STUDIES	
2.0	Introduction.....	2-1
2.1	Air Quality.....	2-3
2.2	Meteorology.....	2-9
2.3	Climatology.....	2-24
2.4	Quality Assurance and Data Recovery.....	2-31
2.5	Visibility.....	2-34
2.6	Summary.....	2-40
3	TERRESTRIAL STUDIES	
3.0	Introduction.....	3-1
4	AQUATIC STUDIES	
4.0	Introduction.....	4-1
5	HYDROLOGY STUDIES	
5.0	Introduction.....	5-1
5.1	On-Site Data.....	5-2
5.2	Water Chemistry Analysis.....	5-20
5.3	Summary.....	5-33
6	SPECIAL STUDIES/ECOLOGICAL INTERRELATIONSHIPS	
6.0	Introduction.....	6-1
6.1	Revegetation.....	6-2
6.2	Shrub Growth Enhancement on a Simulated Mine Site and/or Disposal Pile Bench.....	6-34
6.3	Comparison Study of Inhalable and Total Suspended Particulates.....	6-50
6.4	Run-of-Mine Lysimeters.....	6-59
6.5	Summary.....	6-61

LIST OF APPENDICES

Appendix	Title
2-0	Atmospheric Studies
2-1	Meteorological Data
2-1.1	Plots of Meteorological Data at Site 1
2-1.2	Precipitation Data
2-1.3	Snow Depth Data
2-1.4	Barometric Pressure Data
2-2	Visibility Data
5-0	Hydrology Studies
5-1.1	1985 Retort Abandonment On-Site Data Listing
5-1.2	1985 Water Year USGS Data (Daily Field Measurements Data Listing and Water Chemistry Data Listing)
5-2.1	1985 Retort Abandonment Water Chemistry Data Listing
6-0	Special Studies/Ecological Interrelationships
6-1	Experimental Revegetation Data and Analyses
6-1.1	Plot R-1 Experimental Revegetation Data
6-1.2	Plot R-2 Experimental Revegetation Data
6-1.3	Plot R-3 Experimental Revegetation Data
6-1.4	Analyses of Plot R-3 Experimental Revegetation Data
6-2	Shrub Growth Enhancement Studies
6-2.1	Shrub Growth Enhancement Studies Data
6-2.2	Shrub Growth Enhancement Studies Analysis



SECTION 1 INTRODUCTION

The United States Department of Interior/Geological Survey (USGS) initiated planning in 1969 for a prototype oil shale leasing program. Under this program, Gulf Oil Corporation and Standard Oil Company (Indiana) acquired the right to Federal lease Tract C-a in the Piceance Basin of Northwestern Colorado in April 1974. These two companies began development of Tract C-a and formed a Colorado general partnership called Rio Blanco Oil Shale Company. In early 1985, Chevron Corporation completed the acquisition of Gulf Oil Corporation and replaced Gulf Oil Corporation as a general partner of RBOSC. In mid-1985 Standard Oil Company (Indiana) changed its name to Amoco Corporation and retained its share in RBOSC. In January 1986, Amoco Corporation acquired the share of RBOSC owned by Chevron Corporation and formed Rio Blanco Oil Shale Company, Inc., a Division of Amoco Corporation, to develop Tract C-a. Throughout this report, RBOSC will refer to the general partnership between Amoco Corporation and Chevron Corporation which partnership existed throughout the reporting period.

RBOSC has been engaged in extensive environmental data collection programs since its inception in 1974. Environmental baseline data were gathered between October 1974 and September 1976. An interim environmental monitoring program was conducted between September 1976 and August 1977, the period during which the Tract C-a lease was suspended. RBOSC initiated the Modular Development Phase (MDP) of tract development and the MDP Environmental Monitoring Program in August of 1977.

The MDP Environmental Monitoring Program is designed to provide data on air quality, visibility, terrestrial, ecology, aquatic ecology, hydrology, and specialized topics including ecological interrelationships. The program is designed based on the environmental stipulations in the Tract C-a lease, analysis of baseline and interim monitoring data, assessment of probable development impacts, and inputs from the BLM's Oil Shale Projects Office (OSPO). Monitoring is conducted according to the Lease Suspension Period Scope of Work (SOW), the current version of which (Revision 7.0) is dated January, 1983 and was approved by BLM's OSPO.

Data collected through the Environmental Monitoring Program are reported annually, in a year-end report to the OSPO. The first MDP monitoring report (Modular Development Phase Environmental Monitoring Report One, or MDP 1) was published in February 1978. Subsequent reports were published in September 1978, March and August 1979, March and August 1980, March and August 1981, April and September 1982, April and September 1983, April 1984 and May 1985. This report is the fifteenth MDP Monitoring Report (MDP 15), and is the eighth year-end report. The MDP 15 report covers the 1985 reporting year (January 1-December 31, 1985). The report contains presentations and summaries of 1985 data; statistical comparisons between seasons, years, and location; and assessment of any development-related impacts. Sections of the report generally address objectives, methods, results and discussion, and summary and conclusions. Methods are referenced rather than fully described unless they are different from those employed in previous monitoring periods, need clarification, or have not been previously reported.

Major responsibility for implementation of the MDP monitoring program and preparation of the MDP reports rests with the staff of the RBOSC Environmental Affairs Department. However, several other individuals and entities assisted in monitoring activities during the 1985 reporting period. They include the following:

The Industrial Company (TIC) (Operational Hydrology Monitoring)
U.S. Geological Survey (Surface Water Gaging Station Data)
Cathedral Bluffs Shale Oil Company (Visibility Monitoring)
CORE Laboratories, Inc. (Water Quality Sample Analysis)

Volume one of MDP 14 contains the following major sections:

Section 1	Introduction
Section 2	Atmospheric Studies
Section 3	Terrestrial Studies
Section 4	Aquatic Studies
Section 5	Hydrology Studies
Section 6	Special Studies/Ecological Interrelationships
Appendices	

SECTION 2 ATMOSPHERIC STUDIES

2.0 INTRODUCTION

The Tract C-a atmospheric studies program consists of three elements: (1) measurements of total suspended particulate matter (TSP), (2) measurements of selected meteorological parameters, and (3) measurements of visual range within the Piceance Basin. The TSP monitoring locations were originally established to measure the ambient air quality generally upwind and somewhat removed from the expected tract development, and at points where tract development might have an effect on the air quality. Simultaneous meteorological measurements have been made to allow for the prediction of the dispersion of emissions resulting from tract development.

Air quality and meteorological data have been obtained since February 1975 from monitoring instruments located on or near Tract C-a. Data collected during the first two years of monitoring make up the baseline data set. Data from the baseline period were obtained at four locations around the Tract. Following the baseline period, an interim data acquisition program was established to cover an interval during which the tract development lease conditions were modified and partially suspended. During the interim period (February through August 1977), a single air quality and meteorological monitoring station was operated to maintain data continuity. The system was expanded to three meteorological and two air quality monitoring stations for the active Modified In-Situ (MIS) retorting stage of the Modular Development Phase.

Following completion of the MIS retorting program, activity on the tract has decreased to a very low level. The monitoring program has been reduced accordingly, and has been measuring essentially background ambient air quality. Consequently, the ambient air quality monitors were shut down on July 1, 1984, with approval of the Oil Shale Project Office of the Bureau of Land Management. The meteorological and particulate monitoring program was continued until December 31, 1985 (Table 2-1).

Table 2-1. Air Studies Monitoring Parameters and Schedule for 1985, Tract C-a.

Parameter	Location	Start Date	Frequency
Sulfur Dioxide	Site 1	Feb. 1975	Continuous[1/]
Hydrogen Sulfide	Site 1	Feb. 1975	Continuous[1/]
Nitric Oxide	Site 1	Feb. 1975	Continuous[1/]
Nitrogen Oxides	Site 1	Feb. 1975	Continuous[1/]
Ozone	Site 1	Feb. 1975	Continuous[1/]
Carbon Monoxide	Site 1	Feb. 1975	Continuous[1/]
Total Suspended Particulates	Sites 1,3	Feb. 1975	Every 4th Day
Wind speed (10m)	Site 1	Feb. 1975	Continuous
Wind speed (60m)	Site 1	Feb. 1975	Continuous
Wind direction (10m)	Site 1	Feb. 1975	Continuous
Wind direction (60m)	Site 1	Feb. 1975	Continuous
Wind sigma	Site 1	Sept. 1981	Continuous
Ambient temperature (10m)	Site 1	Feb. 1975	Continuous
Temperature differential (10-60m)	Site 1	Feb. 1975	Continuous
Precipitation	Site 1	Feb. 1975	By event
Snow depth and accumulation	Site 1	Nov. 1978	By event
Solar radiation	Site 1	Feb. 1975	Continuous
Visibility	Shelter between Tracts C-a & C-b	Spring 1978	Semi-annually

1/ These monitors were shut down on July 1, 1984.

2.1 AIR QUALITY

A. Total Suspended Particulates

1. Objectives

The objectives of total suspended particulate (TSP) monitoring are to establish a natural background TSP concentration and to monitor the effects of tract development on TSP concentrations.

2. Methods

The methods followed for collection of TSP data were described in MDP Monitoring Report 4 (RBOSC 1979b).

3. Results and Discussion

Quarterly and annual values for the geometric and arithmetic mean and maximum TSP concentrations during 1985 at Sites 1 and 3 are presented in Table 2-2. The highest 24-hour concentration, 35 ug/m^3, was measured on October 28 at Site 3, which may have been a result of activity related to the start of deer hunting season. The second highest concentration at Site 3 was 32 ug/m^3, and occurred on August 13. These values are well below the 24-hour secondary National Ambient Air Quality Standard (NAAQS) for TSP of 150 ug/m^3. Annual geometric means for 1985 were 8 ug/m^3 at Site 1 and 9 ug/m^3 at Site 3. These values are far below the annual secondary NAAQS for TSP of 60 ug/m^3. Annual arithmetic means for 1985 were 12 ug/m^3 at Site 1 and 13 ug/m^3 at Site 3.

The quarterly and annual geometric means and maximum TSP concentrations for 1984 and the baseline period are presented in Tables 2-3 and 2-4, respectively, for comparison. The tables show that the geometric mean annual TSP concentration at Sites 1 increased slightly from 1984 to 1985 (from 7 to 8 ug/m^3 at Site 1, and 8 to 9 ug/m^3 at Site 3). The second highest maximum concentration at Site 1 increased from 26 to 30 ug/m^3 at Site 1, and decreased from 40 to 32 ug/m^3 at Site 3. These small

Table 2-2. Quarterly and Annual Geometric and Arithmetic Means and Maximum Values of 24-hour Average Total Suspended Particulate Concentrations ($\mu g/m^3$) during 1985 on Tract C-a.

Season	Site 1	Site 3
Winter 1985 (Jan, Feb, Dec)		
Geometric Mean	3	3
Arithmetic Mean	3	3
1st Maximum	8	7
2nd Maximum	6	6
Spring 1985 (March-May)		
Geometric Mean	11	11
Arithmetic Mean	13	13
1st Maximum	27	28
2nd Maximum	26	26
Summer 1985 (June-August)		
Geometric Mean	19	22
Arithmetic Mean	20	23
1st Maximum	31	32
2nd Maximum	30	31
Fall 1985 (September-November)		
Geometric Mean	6	8
Arithmetic Mean	9	12
1st Maximum	25	35
2nd Maximum	22	30
1985 Annual		
Geometric Mean	8	9
Arithmetic Mean	12	13
1st Maximum	31	35
2nd Maximum	30	32

Table 2-3. Quarterly and Annual Geometric Means and Maximum Values of 24-hour Average Total Suspended Particulate Concentrations ($\mu g/m^3$) during 1984 on Tract C-a.

Season	Site 1	Site 3
Winter 1984 (Jan, Feb, Dec)		
Geometric Mean	3	3
Arithmetric Mean	4	4
1st Maximum	10	13
2nd Maximum	9	7
Spring 1984 (March-May)		
Geometric Mean	7	8
Arithmetric Mean	10	11
1st Maximum	28	31
2nd Maximum	25	28
Summer 1984 (June-August)		
Geometric Mean	15	15
Arithmetric Mean	16	17
1st Maximum	26	40
2nd Maximum	26	26
Fall 1984 (September-November)		
Geometric Mean	8	8
Arithmetric Mean	10	11
1st Maximum	24	41
2nd Maximum	21	24
1984 Annual		
Geometric Mean	7	8
Arithmetric Mean	10	12
1st Maximum	28	41
2nd Maximum	26	40

Table 2-4. Quarterly and Annual Geometric Means and Maximum Values of 24-hour Average Total Suspended Particulate Concentrations for the Baseline Period (February 1975 to January 1977) ($\mu g/m^3$) on Tract C-a.

Season	Site 1	Site 3
February 1975		
Geometric Mean	--	5
Maximum	--	12
Spring 1985 (March-May)		
Geometric Mean	29	23
Maximum	95	163
Summer 1975 (June-August)		
Geometric Mean	22	47
Maximum	211	247
Fall 1975 (Sep-Nov)		
Geometric Mean	6	18
Maximum	52	137
Winter 1975-76 (Dec-Feb)		
Geometric Mean	2	4
Maximum	10	14
Spring 1976 (March-May)		
Geometric Mean	11	11
Maximum	80	130
Summer 1976 (June-August)		
Geometric Mean	22	27
Maximum	81	105
Fall 1976 (Sep-Nov)		
Geometric Mean	12	35
Maximum	53	281
Winter 1976-1977 (Dec-Jan)		
Geometric Mean	5	5
Maximum	18	59
1975-76 Annual		
Geometric Mean	9	18
Maximum	211	247
1976-77 Annual		
Geometric Mean	8	12
Maximum	81	281

changes are probably not significant, and reflect the very low activity levels at the Tract. The geometric means for 1984 and 1985 show that the TSP concentrations have reached baseline levels, which had geometric means of 8 and 9 ug/m^3 during the two-year baseline period.

Correlation Analysis

Table 2-5 provides the correlation coefficient (r) and the coefficient of determination (r^2) between Sites 1 and 3 for the TSP concentrations. The correlations were computed on the annual data set for each of the two baseline years (1975-77) and the seven developmental years starting in 1979. The correlations between the two sites were lowest for the baseline years, and have increased to a range of 0.8-0.9 during the last six years. No rationale for the relatively low correlations during the baseline years has been developed.

The correlations for 1985 are quite high, since the coefficient of determination (r^2) given in Table 2-5 for Sites 1 and 3 shows that 76 percent of the annual variation in TSP concentration at Site 1 is associated with the variations at Site 3. The similarity in the patterns of TSP concentrations appears to reflect primarily regional rather than localized influences. With the current low activity levels in the area, there are relatively few localized sources affecting the TSP concentrations.

Additional analyses of the TSP data are presented in Section 6.5, in conjunction with a special study of inhalable particulate data (PM_{10} and PM_6) collected concurrently with the TSP data at Tract C-a.

Table 2-5. Correlation Coefficients (r) and Coefficients of Determination (r^2) for the 24-hour Average Total Suspended Particulate Concentrations between Sites 1 and 3 during the MDP and Baseline periods, Tract C-a

Period	Correlation Between Sites 1 and 2 r	r^2
Baseline		
2/75 - 1/76	0.31	0.10
2/76 - 1/77	0.49	0.24
Modular Development Phase		
1979	0.60	0.36
1980	0.83	0.69
1981	0.85	0.72
1982	0.90	0.81
1983	0.83	0.70
1984	0.86	0.73
1985	0.87	0.76

The sample sizes for these correlations range from 72 to 115.

2.2 METEOROLOGY

Meteorological parameters are monitored to provide information on the general climate of Tract C-a and vicinity. They will also provide a basis for estimating the potential impact of emissions that may result from tract development and operation. One meteorological monitoring site was in operation during 1985. Meteorological data were taken at the 10-m and 60-m levels at Site 1. The parameters measured at this site are given in Table 2-1. Site 1 is at an elevation of 7,335 feet above mean sea level (MSL), and is located just west of the tract boundary. This section of the report deals primarily with the meteorological data collected during the period January-December 1985. Plots of meteorological data collected from continuous monitoring instruments are presented in Appendix 2-1.1. Precipitation data and snow depth measurements are presented in Appendices 2-1.2 and 2-1.3, respectively. Barometric pressure data are presented in Appendix 2-1.4. The data for the baseline period and the previous years of the MDP period were extracted from earlier reports (RBOSC 1977, RBOSC MDP Monitoring Report 3, RBOSC MDP Monitoring Report 5, RBOSC MDP Monitoring Report 7, RBOSC MDP Monitoring Report 9, RBOSC MDP Monitoring Report 11, RBOSC MDP Monitoring Report 13, and RBOSC MDP Monitoring Report 14) for comparison purposes.

A. Temperature and Stability

1. Objectives

Ambient air temperature, a primary climatic parameter, provides basic information on monthly and year-to-year variability of climatic conditions at Tract C-a. The measured vertical temperature differential within the lowest boundary layers is a measure of the stability of the atmosphere. Atmospheric stability strongly influences the dispersion of emissions into the atmosphere, and is therefore an important input into air quality models.

2. Methods

The methods followed for collection of temperature data were described in MDP Monitoring Report 3 (RBOSC 1979a).

3. Results and Discussions

Table 2-6 presents a summary of monthly, seasonal, and annual temperature statistics for 1985 at Site 1 (10-m level). The temperature statistics presented for this site include mean, maximum, and minimum temperature.

The mean annual temperature at Site 1 was 6.7 ^{o}C. The extreme temperatures recorded at the tract during 1985 were 30.0 ^{o}C and -23.5 ^{o}C.

The temperature record allows the calculation of the length of the frost-free period at the site. This information is helpful in determining the required hardiness and suitability of plants that will be used in revegetation of the tract. However, it should be noted that these temperatures are measured at 10-m above ground level, so that the first and last excursion below 0 ^{o}C at 10-m (as used here) probably represents a "hard frost" at the ground surface.

Table 2-7 presents the frost-free period for the ten years at Site 1. The table also provides the 1980-1985 frost-free period for several climatological stations located in the vicinity of the tract. It should be noted that the National Weather Service stations measure the temperature at 2 meters, so the data are not strictly comparable to the data taken at the tract. However, they are included for reference.

The table shows that the frost-free period at Site 1 has ranged from 111 to 156 days over the nine years of record. The last frost date in the spring at the Tract is quite late, averaging around the last two weeks in May. The last frost date has been recorded as late as June 14. The first frost date in the fall ranges from mid-September to mid-October.

Table 2-6. Monthly, Seasonal, and Annual Summary of Temperatures (^{o}C) (Mean, Average Daily Maximum, Average Daily Minimum, Absolute Maximum, Absolute Minimum), January-December 1985, Site 1 10-m Level, Tract C-a.

Period	Mean	Max	Min
January	-6.7	5.7	-23.2
February	-5.1	7.8	-23.5
March	0.1	11.6	-14.6
April	7.2	18.5	-3.4
May	11.6	20.7	-1.8
June	17.5	27.9	1.3
July	19.5	30.0	10.9
August	20.3	28.2	6.2
September	11.4	25.6	-5.2
October	7.4	18.5	-4.7
November	-0.7	13.9	-13.8
December	-2.6	5.4	-20.8
Seasonal			
Winter (Dec, Jan, Feb)	-4.8	7.8	-23.5
Spring (Mar, Apr, May)	6.3	20.7	-14.6
Summer (Jun, July, Aug)	19.1	30.0	1.3
Fall (Sept, Oct, Nov)	6.0	25.6	-13.8
Annual	6.7	30.0	-23.5

Table 2-7. Frost-free Period for Site 1 During the Period of Record, and the Frost-free Period During Recent Years for Selected Climatological Stations.

	Frost-Free Period							
	Site 1		Meeker		Little Hills		Grand Junction	
Year	Length (Days)	Dates	Length (Days)	Dates	Length (Days)	Dates	Length (Days)	Dates
1985	138	05/13-09/28	106	05/29-09/12	60	06/11-08/10	160	04/23-09/30
1984	140	05/07-09/24	106	06/11-09/25	78	06/22-09/08	178	04/29-10/24
1983	124	05/18-09/19[1/]	98	06/14-09/20			206	04/17-11/09
1982	147	05/11-10/05	114	06/09-10/01			173	04/21-10/11
1981	156	05/13-10/16	118	06/16-10/12			202	04/06-10/25
1980	144	05/25-10/16	101	06/02-09/11			192	04/14-10/23
1979	133	06/09-10/20						
1978	111	05/31-09/19						
1976	112	06/14-10/04						
1975	132	05/29-10/08						

1/ Estimated due to lightning strike on tower during this period.

The frost-free periods at Meeker and Little Hills are somewhat shorter than on the tract (probably due to the difference in height above ground level that measurements are taken), but at Grand Junction the period is significantly longer. This is probably a function primarily of Grand Junction's lower elevation (4800 ft. vs. 7300 ft. at Site 1).

Table 2-8 provides a summary of annual absolute minimum, absolute maximum, and mean values of the air temperature recorded at Site 1 during each of the ten years of data collected to date. There appears to have been no consistent trend during the period of record.

B. Wind Speed and Wind Direction

1. Objectives

The wind speed and wind direction influence atmospheric dispersion. Measurement of the frequency of occurrence of wind speed and wind direction classes can also be used in interpreting air quality data.

2. Methods

The methods followed for collection of wind data were described in MDP Monitoring Report 3 (RBOSC 1979a).

3. Results and Discussion

Annual wind roses for the 10-m and 60-m levels at Site 1 during 1985 are presented in Figures 2-1 and 2-2.

The Site 1 annual 10-m level wind rose for 1985 (Figure 2-1) shows the prevalent wind direction to be from the west (W on wind rose), with secondary maxima from the south-southwest (SSW), southwest (SW), and west-southwest (WSW). The mean wind speeds associated with these directions were 7.9, 9.1, 5.8 and 6.3 mph, respectively. The wind came from these four directions 54 percent of the time. These data are consistent with annual wind roses for previous years at this site. At

Table 2-8. Summary of Annual and Combined Ten-Year Onsite Climatology of Absolute Minimum, Absolute Maximum and Mean Temperatures (^{o}C) During the Baseline and MDP Periods, Tract C-a.

Temperatures[1/]	2/75-1/76	2/76-1/77	1978	1979	1980	1981	1982	1983	1984	1985	Combined 10-Year Data Set
Site 1 (10-m level)											
Absolute Minimum	-21.1	-21.7	-24.0	-24.6	-15.5	-19.9	-26.2	-22.6	-21.7	-23.5	-26.2
Absolute Maximum	30.1	29.7	30.4	28.5	28.0	29.7	29.4	29.0	27.7	30.0	30.4
Mean	6.1	7.2	7.1	6.6	7.6	8.0	6.2	6.7	5.9	6.7	6.8

1/ Minimum and maximum annual temperatures are based on hourly average values for each 1-year period.

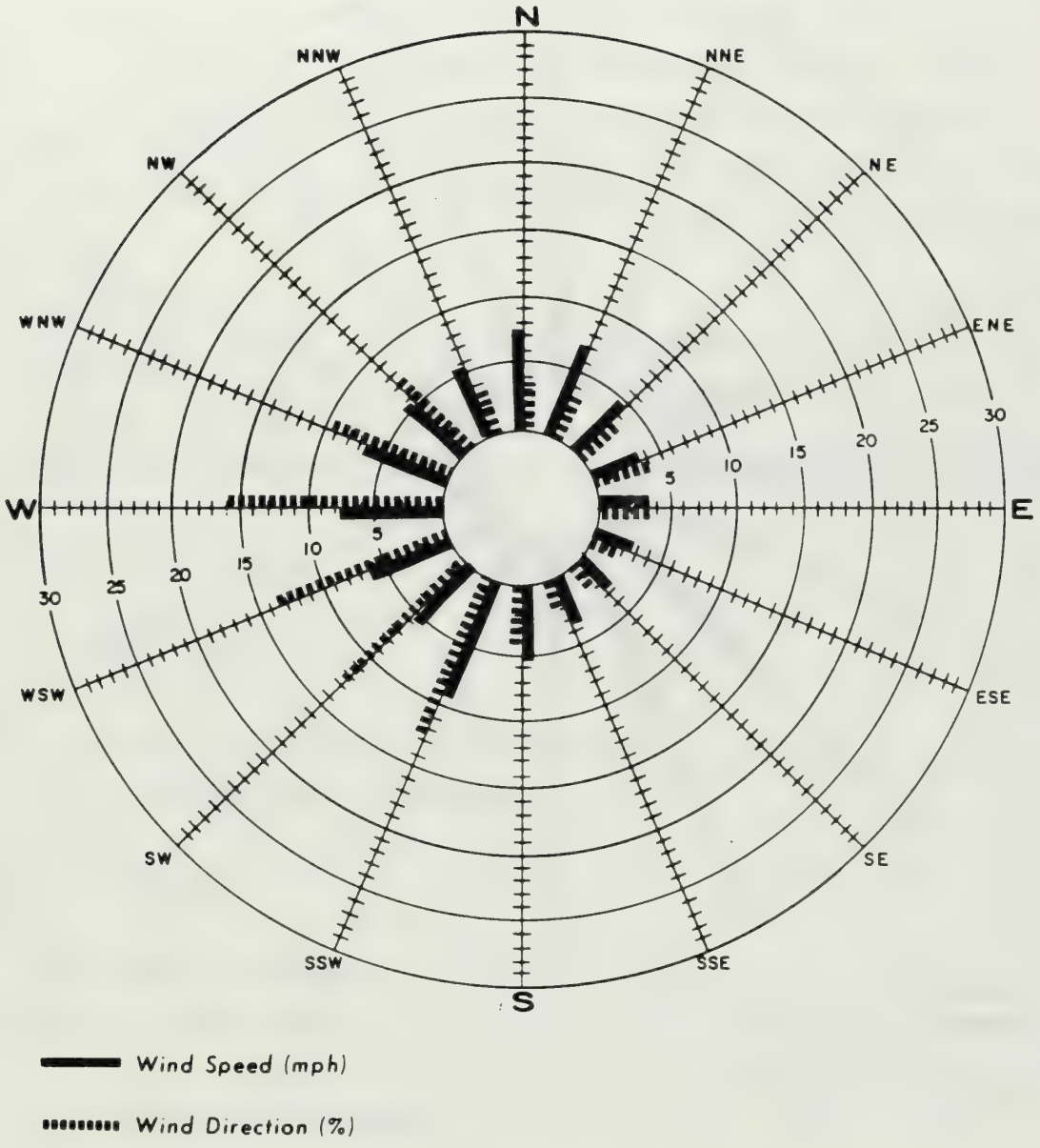


Figure 2-1. Annual Wind Rose, January-December 1985, Site 1 10-m Level, Tract C-a.

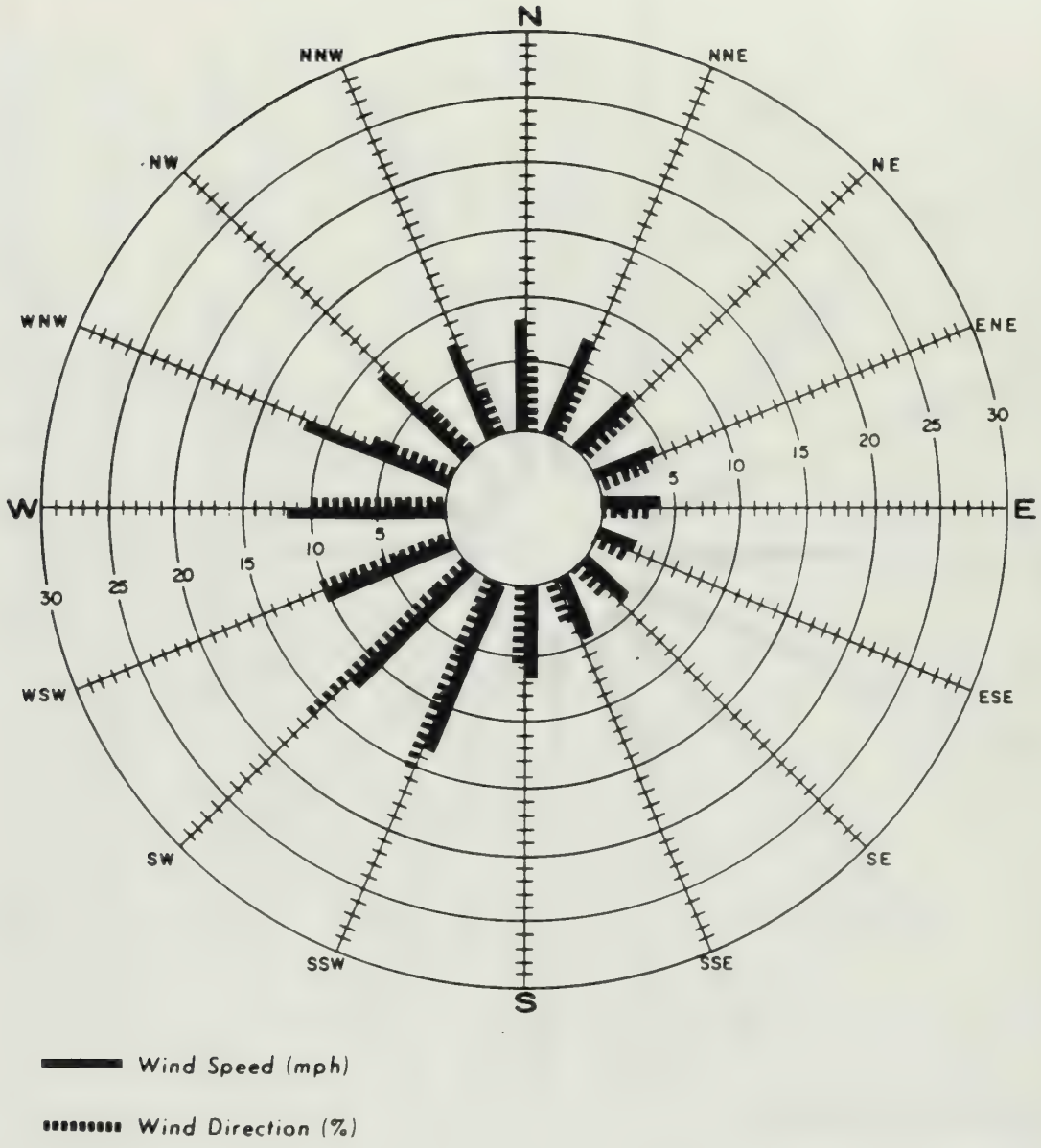


Figure 2-2. Annual Wind Rose, January-December 1985, Site 1 60-m Level, Tract C-a.

Site 1, the wind directions with the lowest frequency of occurrence, as well as the lowest average wind speeds, have been from the southeastern quadrant during the entire data record.

The Site 1 annual 60-m level wind rose for 1985 (Figure 2-2) shows the prevalent wind direction to be from the southwest, with secondary maxima from the west, west-southwest, and the south-southwest. The mean wind speeds associated with these directions were 12.4, 11.9, 10.1, and 13.3 mph, respectively. The wind came from these four directions 52 percent of the time. These data are also consistent with data from previous years.

Table 2-9 contains a summary of the absolute maximum and mean hourly wind speeds recorded at the two sites during each of the years of record. The mean wind speeds during the current year were 6.4 mph at the Site 1 10-m level and 9.7 mph at the Site 1 60-m level.

C. Precipitation

1. Objectives

Precipitation is recorded to provide data on the moisture availability for plant growth and revegetation.

2. Methods

The methods followed for collection of these data were described in MDP Report 2 (RBOSC 1978).

3. Results and Discussion

Data from the three types of precipitation gauges for 1985 are included in Appendix 2-2.2. Snow depth measurements taken during 1985 are presented in Appendix 2-2.3.

Table 2-9. Summary of Annual Maximum and Mean Wind Speeds (mph) During the Baseline and MDP Periods, Tract C-a.

Wind Speeds (mph)[1/]	2/75-1/76	2/76-1/77	1978	1979	1980	1981	1982	1983	1984	1985	Combined 10-Year Data Set
Site 1 (10-m level)											
Maximum	30.8	32.3	27.2	28.7	31.6	26.1	29.6	31.0	38.4	30.2	38.4
Mean	7.7	7.2	7.3	7.3	7.3	7.0	6.9	6.6	6.3	6.4	7.0
Site 1 (60-m level)											
Maximum	43.0	56.6	41.5	38.0	40.8	33.8	37.8	40.5	38.4	41.7	56.6
Mean	10.6	10.0	10.2	9.5	10.1	9.7	9.4	8.9	8.6	9.7	9.7

1/ Values based on hourly averages.

Table 2-10 presents the monthly, seasonal, and annual precipitation at Site 1 for 1985. The table is compiled from data collected by tipping bucket, weighing bucket, and wedge gauges. Precipitation measured by the three gauges during 1985 ranged from 7.80 to 16.91 inches. Although the natural variability of precipitation is high in semi-arid regions, a substantial part of the range in values is probably due to different exposures and capture efficiencies of the gauges.

The weighing bucket gauges are thought to produce the most representative precipitation data, due to a better exposure and the improvement in winter capture efficiency through the use of snow shields. The tipping bucket gauges have historically recorded lower amounts of precipitation than other gauges, which may be due to a less efficient capture and measurement technique (RBOSC 1980).

Table 2-11 presents the results of the precipitation measurements collected onsite over the past seven years. The best estimate of annual precipitation, based on data from the weighing bucket gauge, indicates that precipitation totalled approximately 14 inches in 1978 and 1979, 12 inches in 1980, 17 inches in 1981, 16 inches in 1982, 21 inches in 1983, 22 inches in 1984, and 17 inches in 1985.

The wettest month during 1985 was July with 4.27 inches. No other month had more than 2 inches of precipitation. Based upon the precipitation record measured at Tract C-a, it is highly unusual to have several months with relatively high precipitation. In seven of the last eight years, no more than one month in each year had more than 3 inches of precipitation. During the one year that was an exception to this rule, a precipitation record (22 inches) was set at Tract C-a. Apparently, the increased precipitation was due to a greater number of storms bringing more precipitation over a considerable part of the year, rather than a few events increasing precipitation over a short period of time.

Table 2-10. Monthly, Seasonal, and Annual Precipitation (inches) at Site 1 from Available Tipping Bucket Gauge, Weighing Bucket Gauge, and Wedge Gauge Data at Tract C-a for the period January - December 1985.

Period	Gauge Type		
	Tipping Bucket Gauge	Weighing Bucket Gauge	Wedge Gauge
January	0.01	0.85	1.05
February	0.04	0.42	0.23
March	0.17	1.30	1.48
April	0.23	1.58	1.43
May	0.60	1.10	1.18
June	0.40	0.76	0.74
July	2.89	4.27	3.21
August	0.10	0.17	0.16
September	1.33	1.58	1.68
October	1.47	2.01	2.33
November	0.19	1.50	1.57
December	0.37	1.37	1.77
Seasonal			
Winter (Dec, Jan, Feb)	0.42	2.64	3.05
Spring (Mar, Apr, May)	1.00	3.98	4.09
Summer (Jun, July, Aug)	3.39	5.20	4.11
Fall (Sep, Oct, Nov)	2.99	5.09	5.58
Annual	7.80	16.91	16.83

Table 2-11. Summary of Precipitation Measurements (inches) by Three Different Gauges During the Past Eight Years at Site 1, Tract C-a.

Gauge Type	1978	1979	1980	1981	1982	1983	1984	1985
Tipping Bucket								
Winter	-	0.81	1.86	0.75	1.02	2.05	0.85	0.42
Spring	-	3.66	3.83	3.34	2.00	6.60	4.91	1.00
Summer	-	2.38	2.65	4.29	2.55	2.77	8.17	3.39
Fall	1.63	2.93	0.98	4.87	-	4.40	5.67	2.99
Annual	-	9.78	9.32	13.25	-	15.82	19.60	7.80
Weighing Bucket								
Winter	4.15	2.24	2.27	1.92	2.59	3.32	2.12	2.64
Spring	5.15	6.06	5.25	3.61	3.05	8.95	5.63	3.98
Summer	1.71	2.17	2.56	4.69	3.08	3.04	8.43	5.20
Fall	3.21	3.28	1.52	6.59	7.64	5.65	5.96	5.09
Annual	14.22	13.75	11.60	16.81	16.36	20.96	22.14	16.91
Wedge								
Winter	3.28	1.50	2.52	1.85	2.25	3.37	1.93	3.05
Spring	4.27	5.44	4.99	4.91	3.01	7.09	4.88	4.09
Summer	1.82	2.28	3.25	5.14	3.23	3.37	7.69	4.11
Fall	2.94	2.15	2.24	5.73	7.80	5.09	5.58	5.58
Annual	12.31	11.65	13.14	18.34	16.28	18.92	20.08	16.83

D. Solar Radiation

1. Objective

Solar radiation is monitored to supplement the data base for interpreting the meteorological and air quality data.

2. Methods

The methods followed for collection of these data were described in MDP Monitoring Report 4 (RBOSC 1979b).

3. Results and Discussion

Table 2-12 presents the maximum and mean (based on daylight hours only) monthly solar radiation at Site 1 for 1984. The average solar radiation during daylight hours was 0.51 ly/min.

Table 2-12. Maximum and Mean Solar Radiation (ly/min) at Site 1, January - December 1985, RBOSC, Tract C-a.

Month	Maximum[1/] Solar Radiation (ly/min)	Mean[1/] Solar Radiation (ly/min)
January	0.94	0.38
February	1.07	0.40
March	1.31	0.50
April	1.34	0.62
May	1.41	0.61
June	1.42	0.70
July	1.40	0.58
August	1.35	0.66
September	1.25	0.53
October	1.05	0.45
November	1.01	0.34
December	0.67	0.34
Season		
Winter	1.07	0.37
Spring	1.41	0.58
Summer	1.42	0.65
Fall	1.25	0.44
Annual	1.42	0.51

1/ Maximum and mean values computed from hourly average during daylight hours.

2.3 CLIMATOLOGY

This section presents a description of the general climatology of the region in which Tract C-a is located.

1. Objectives

It is the intent to develop a climatology by comparing meteorological data collected from the RBOSC site (defined as "onsite") with both short-term and long-term climatic data available from other meteorological stations in the region. The rugged topography of western Colorado causes variations in climate within short distances, and caution must be used when applying climatic generalizations to the whole area. Ideally, the most accurate way of characterizing the climatology of Tract C-a is to develop a long-term meteorological data base from data gathered onsite. The available onsite meteorological data base of ten years cannot be construed as being representative of the long-term climatic conditions in the tract area; however, the onsite data can be compared with similar short-term and long-term data in the region to identify site-specific climatic conditions due to elevation, exposure, and the orientation of mountain ranges and valleys.

2. Methods

The methods followed for collection of climatological data were described in MDP Monitoring Report 3 (RBOSC 1979a).

3. Results and Discussion

Figure 2-3 presents the sources of climatological data in the northwest section of the State of Colorado, where Tract C-a is located at an average elevation of 7000 feet above Mean Sea Level. The weather station closest to the tract is Little Hills, located 15 miles to the northeast at an elevation of 6140 feet. The Meeker No. 2 station is located about 30 miles to the east-northeast at an elevation of 6350 feet. Grand Junction, at an elevation of 4843 feet, is about 60 miles

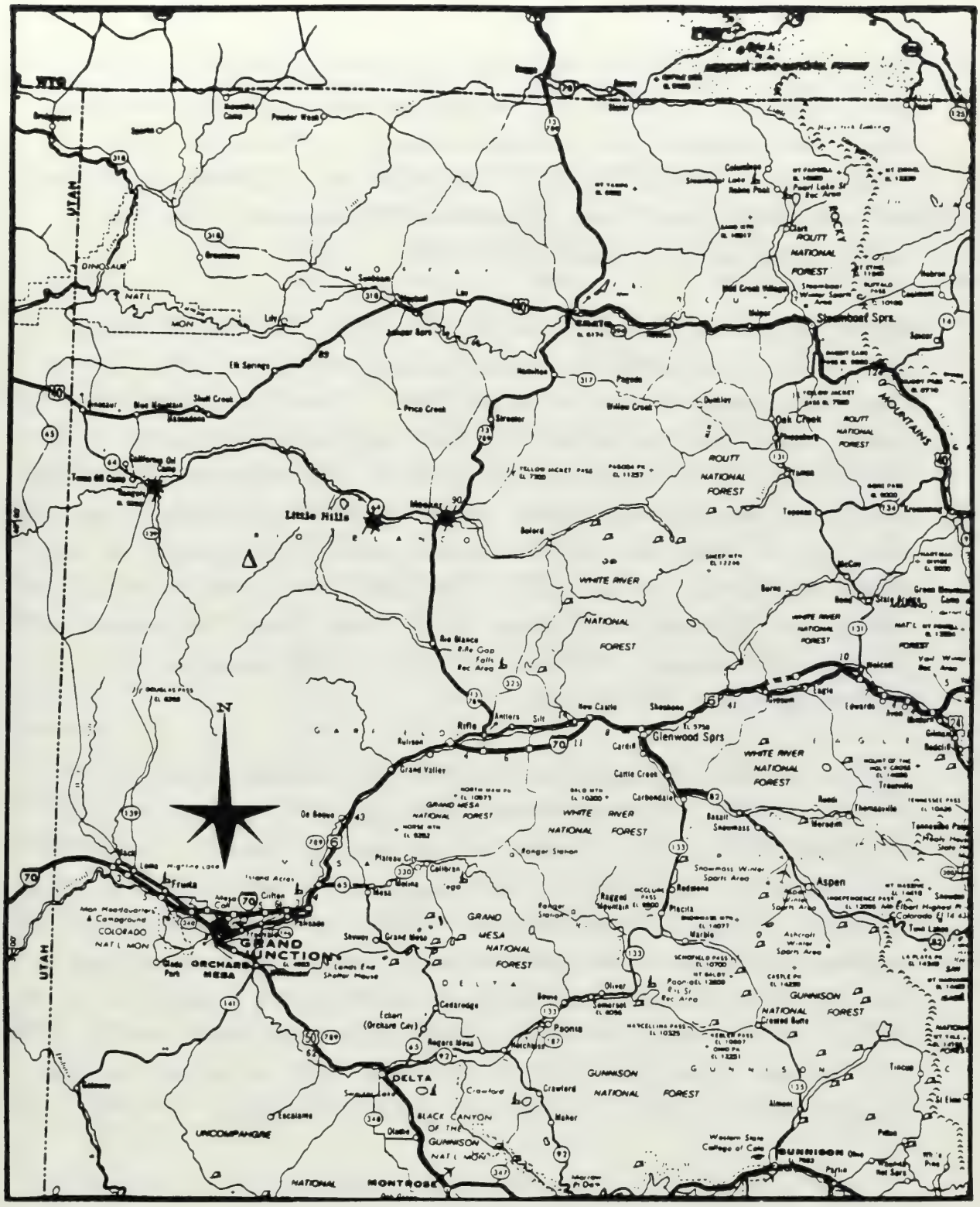


Figure 2-3. Map of Northwest Colorado Showing the Rio Blanco Region.

south of the site. All of these stations monitor temperature and precipitation. At the National Weather Service station at Grand Junction, other parameters are measured as well. A discussion of the climatology and the influences of topography on the general meteorological and climatic conditions in the area was presented in the Final Environmental Baseline Report (RBOSP 1977).

Meteorological data collected at the site during 1985 can be compared to data for the same period from Grand Junction and to the Grand Junction long-term average for the period 1951-1980. Table 2-13 presents the monthly departures from normal for Grand Junction mean temperature and total precipitation during the current year. The departure of the 1985 mean annual temperature at Grand Junction from the long-term average was +0.5 ^{o}F. The Grand Junction mean annual temperature exceeded the RBOSC Site 1 mean during 1985 by 9.2 ^{o}F. The annual precipitation during the current year at Grand Junction was 11.84 inches, nearly 50 percent above the long-term average. This was still 5.07 inches below the total measured at Site 1 for the year.

Table 2-13 indicates that Grand Junction data compares rather poorly with onsite data. The mean annual temperature at Grand Junction has been consistently 7-10 ^{o}F higher than the mean at Tract C-a during the last ten years. In addition, total annual precipitation has been higher at Tract C-a than at Grand Junction in each of the last eight years, ranging from 1.7 to 10.55 inches higher. Consequently, Grand Junction data should be used very cautiously in describing the climatology of the region. This climatic difference between Site 1 and Grand Junction can also be seen in the frost-free period (Table 2-11), which has averaged 44 days longer at Grand Junction over the last six years.

This difference is not unexpected, since Grand Junction is located in a valley approximately 2500 feet lower than Site 1. In fact, by using the NACA Standard Atmosphere lapse rate for 40 degree N latitude of 3.57 ^{o}F/1000 ft (Hess 1959), an estimate can be made of the temperature that would be expected if the Grand Junction station was at the same altitude as Site 1. Using this approximation, the Grand Junction mean

Table 2-13. Monthly Departures from the Long-Term Means for the Data Period January-December 1985 for Grand Junction and Comparison with Tract C-a Annual Values.

Month	Temperature (°F) Long Term Mean	1985 Mean	Departure from Mean	Precipitation (inches) Long Term Mean	1985 Total	Departure from Mean
Grand Junction						
January	25.5	31.1	+5.6	0.64	0.37	-0.27
February	33.5	32.0	-1.5	0.54	0.08	-0.46
March	41.9	43.9	+2.0	0.75	0.93	+0.18
April	51.7	54.5	+2.8	0.71	1.78	+1.07
May	62.1	63.6	+1.5	0.76	1.09	+0.33
June	72.3	73.0	+0.7	0.44	0.39	-0.05
July	78.9	77.6	-1.3	0.47	1.21	+0.74
August	75.9	77.1	+1.2	0.91	0.24	-0.67
September	67.1	62.6	-4.5	0.70	1.67	+0.97
October	54.9	52.8	-2.1	0.87	2.25	+1.38
November	39.6	38.8	-0.8	0.63	1.10	+0.47
December	29.5	31.9	+2.4	0.55	0.73	+0.18
Annual	52.7	53.2	+0.5	7.97	11.84	+3.87
RBOSC Site 1		44.0			16.91	
RBOSC departure from Grand Junction		-9.2			+ 5.07	
RBOSC Site 1 Mean	44.2[1/]			16.59[2/]		

1/ Based on 10-year data record
2/ Based on 8-year data record

annual temperature would be reduced by 8.9 degree F. Thus, the large discrepancy in mean annual temperatures between the site and Grand Junction can be accounted for largely by the altitude differential.

Table 2-14 presents monthly temperature data collected during 1985 from Site 1, two nearby climatological stations (Meeker No. 2 and Little Hills), and Grand Junction. The table shows, as discussed above, that Grand Junction temperature data are not very representative of temperatures of Rio Blanco County. The mean monthly and annual temperatures at the two climatological stations in the county agree fairly well with the onsite data, especially considering the elevation and topographical differences among the sites. However, a major difference between Site 1 and the other stations is evident in the temperature range (the difference between the maximum and the minimum), which is greater at the climatological stations. This is due primarily to the relative height of the instruments above the ground surface. Climatological stations measure temperature 6 feet above the ground in a standard weather shelter, whereas the Site 1 temperature sensor is located at 10 meters (33 ft.). Since temperature changes in the lower layers of the atmosphere result from heat transfer to and from the ground surface, the diurnal temperature range will decrease with height above the ground. Thus, the reduced temperature range at Site 1 relative to the surrounding stations is largely due to the increased height above ground of the temperature sensors at Site 1.

Table 2-15 presents a comparison of precipitation data from Site 1 and from surrounding stations for the current year. Monthly precipitation amounts at all of the stations vary widely due to the complex orographic influences of the region and the intermittent nature of precipitation (particularly during the summer). Annual totals at Site 1 and the climatological stations range between 17 and 18 inches. Grand Junction, with 12 inches of precipitation, had the lowest monthly total of all stations, probably because of its location in a large valley.

Table 2-14. Comparison of Monthly Temperatures (^{o}F) in the Vicinity of Tract C-a for the Data Period January-December 1985.

	Tract C-a Site 1			Little Hills			Meeker No. 2			Grand Junction		
Month	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
January	42	-10	19.9	49	-20	17.3	45	-21	20.0	48	8	31.1
February	46	-10	22.8	52	-34	18.1	49	-31	21.6	53	1	32.0
March	53	6	32.1	62	-2	32.8	62	-3	34.0	71	17	43.9
April	65	26	45.0	75	19	44.0	74	19	45.6	82	31	54.5
May	69	29	52.8	77	24	52.4	77	27	53.0	86	37	63.6
June	82	34	63.5	91	31	59.5	90	34	62.0	98	44	73.0
July	86	52	67.1	94	42	66.9	93	44	67.4	102	58	77.6
August	83	43	68.1	93	29	64.4	90	35	65.5	98	48	77.1
September	78	23	52.6	87	20	53.8	86	17	53.1	91	32	62.6
October	65	23	45.3	--	--	--	75	21	46.0	75	33	52.8
November	57	7	30.8	66	-1	32.0	67	7	32.8	64	8	38.8
December	44	-5	27.2	50	-20	21.8	48	-15	24.2	50	9	31.9
Annual			44.0			42.1			43.8			53.2

Table 2-15. Comparison of Monthly Precipitation (inches) in the Vicinity of Tract C-a for the Data Period January - December 1985.

Month	Tract C-a Site 1	Little Hills	Meeker No. 2	Grand Junction
January	0.85	1.06	1.19	0.37
February	0.42	0.42	0.22	0.08
March	1.30	1.68	1.91	0.93
April	1.58	2.91	2.54	1.78
May	1.10	1.38	1.27	1.09
June	0.76	1.16	0.82	0.39
July	4.27	2.32	2.14	1.21
August	0.17	0.07	0.71	0.24
September	1.58	1.30	0.69	1.67
October	2.01	2.97[1/]	2.97	2.25
November	1.50	2.31	2.85	1.10
December	1.37	0.60	0.95	0.73
Annual	16.91	18.18	18.26	11.84

1/ Estimated from Meeker No. 2 station data.

2.4 QUALITY ASSURANCE AND DATA RECOVERY

The data upon which this report is based, with the exception of the visibility, precipitation and total suspended particulate data, were collected by an automatic data acquisition system located on Tract C-a. The data are recorded on magnetic tape, paper printouts and analog strip chart recorders. A comprehensive quality assurance program has been maintained to ensure the reliability and accuracy of the data. This program includes documentation by the site technician of all calibrations and system malfunctions, quarterly calibrations of the TSP monitors by the site technician and an independent auditing team, operation of a colocated TSP monitor, semiannual calibrations of the meteorological instrumentation, and review of the analog and digital data by qualified analysts.

The use of colocated TSP monitors at Site 1 allowed estimates of precision to be made, and the calculation of quarterly upper and lower 95 percent probability limits for differences between the two colocated monitors:

	Winter	Spring	Summer	Fall
Upper 95 Percent Probability	+56%	+30%	+17%	+12%
Lower 95 Percent Probability	-50%	-26%	-11%	-30%
No. of Colocated Samples	15	19	15	14

The confidence bounds are much wider in the winter than in the summer, which is more a function of the calculation technique than a change in the precision of the monitors. The reason for this is that the probability calculations are based upon percentage rather than absolute differences in monitor concentrations. With the low particulate concentrations typically found in the winter (mean winter TSP concentration was 4 ug/m^3), small differences in TSP concentrations between the colocated monitors can result in abnormally large percentage differences. Overall, the data from the two colocated monitors tracked very closely, with a correlation of 0.98 between the two 1985 data sets.

Data recoveries for all meteorological parameters collected by the onsite data acquisition system are presented in Table 2-16. The data recovery for all parameters exceeded 90 percent, with the exception of the 60-m wind speed, which had a data recovery of 87 percent.

Table 2-16. Annual Data Recovery (%) of Meteorological Parameters Monitored at Tract C-a for the Period January - December 1985.

Parameter	Data Recovery (%)
Site 1	
10 m wind speed	99.6
10 m wind direction	99.6
60 m wind speed	87
60 m wind direction	94
10 m temperature	99
60 m temperature	99
Delta T 60-10 m	99
Solar radiation	99

2.5 VISIBILITY

Documentation of visibility in the Piceance Creek Basin is a cooperative study conducted by RBOSC and the Cathedral Bluffs Shale Oil Company.

1. Objectives

The objectives of this program are to document the visibility in the area of the Piceance Creek Basin and identify trends or variations in visibility which may be evident during the monitoring program. The results of this program will provide visibility data against which future data may be compared, and with which concurrent meteorological and air quality data may be incorporated for further evaluation and consideration.

2. Methods

Two methods have been used to measure visibility in the Piceance Basin: photography and telephotometry. During the Baseline Period (1975-76) and the first year of the MDP period (1978), only the photographic method was employed. This method was described in MDP Monitoring Report 1 (RBOSC 1978). From 1979 through 1982 visibility data were taken by both photographic and telephotometric methods. In April 1983, the Oil Shale Projects Office approved elimination of the photographic measurements, provided that a consistent set of visibility data based on telephotometric measurements could be developed. This data set was developed and supplied to the Oil Shale Projects Office, and presented in RBOSC MDP Report 14. Data are normally collected every fourth day along four views from a centrally located shelter (Figure 2-4) during the spring and the fall.

3. Results

Responsibility for the collection of the visibility data was transferred from RBOSC to the Cathedral Bluffs Shale Oil Company before the start of

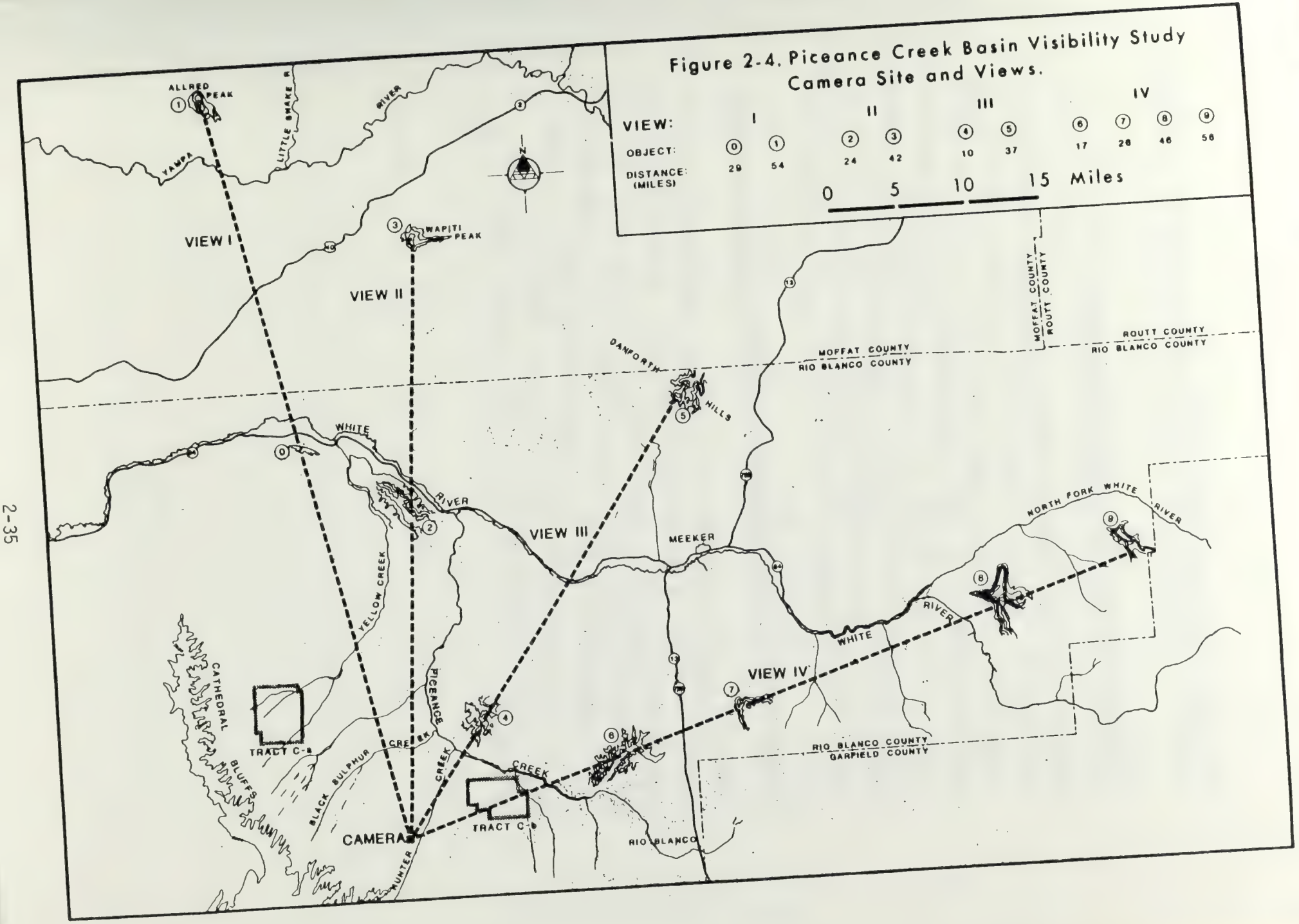


Figure 2-4. Piceance Creek Basin Visibility Study
Camera Site and Views.
VIEW: I II III IV
OBJECT: 0 1 2 3 4 5 6 7 8 9
DISTANCE: (MILES) 29 54 24 42 10 37 17 28 46 56
0 5 10 15 Miles
ALLRED PEAK
WAPITI PEAK
VIEW I
VIEW II
VIEW III
VIEW IV
CAMERA
TRACT C-a
TRACT C-b
WHITE RIVER
NORTH FORK WHITE RIVER
YAMPA RIVER
LITTLE SNAKE R
YELLOW CREEK
PICEANCE CREEK
BLACK SULPHUR CREEK
HUNTER CREEK
CATHEDRAL BLUFFS
DANFORTH HILLS
MEEKER
RIO BLANCO
MOFFAT COUNTY
ROUTT COUNTY
RIO BLANCO COUNTY
GARFIELD COUNTY

the 1985 visibility monitoring program. Visual range data for 1985 are presented in Appendix 2-2.

Evaluation and Comparison of Daily Visual Ranges

The daily mean visual ranges in 1985 are presented by view in Table 2-17 and Figure 2-5. As shown in both the table and figure, the daily mean visual ranges for all views have a high variability: The 1985 spring mean visual range was 86 miles, with the daily mean visual range varying from 45 to 129 miles. On July 8, the day which had the lowest measured visual range (45 miles), the observer noted very hazy conditions. He also noted that a radio station had stated that the hazy conditions were due to smoke transported from large fires burning in California.

Evaluation and Comparison of Seasonal and Annual Average Visual Ranges

Table 2-18 shows the seasonal and annual mean visual ranges in the Piceance Basin for the entire 9 years of record. The spring mean visual range during the period of record varied from 74 to 88 miles, while the fall mean visual range varied from 76 to 102 miles. The mean annual visual range varied from 80 to 95 miles during the period of record, with an overall mean visual range of 86 miles. There was no historical trend evident in the data during the 10-year period in which data were collected.

Table 2-17. Daily and Seasonal Visual Ranges (miles) in Piceance Basin by View in 1985.

Date	View I	View II	View III	View IV	All Views
Spring					
05/09	117	115	130	154	129
05/13	101	82	90	69	85
05/17	86	89	101	123	100
05/21	95	87	77	65	81
05/29	102	94	94	108	99
06/06	97	88	101	113	100
06/14	80	69	76	86	78
06/18	71	68	71	90	75
07/04	70	65	71	85	72
07/08	47	41	42	50	45
Spring	87	80	85	94	86

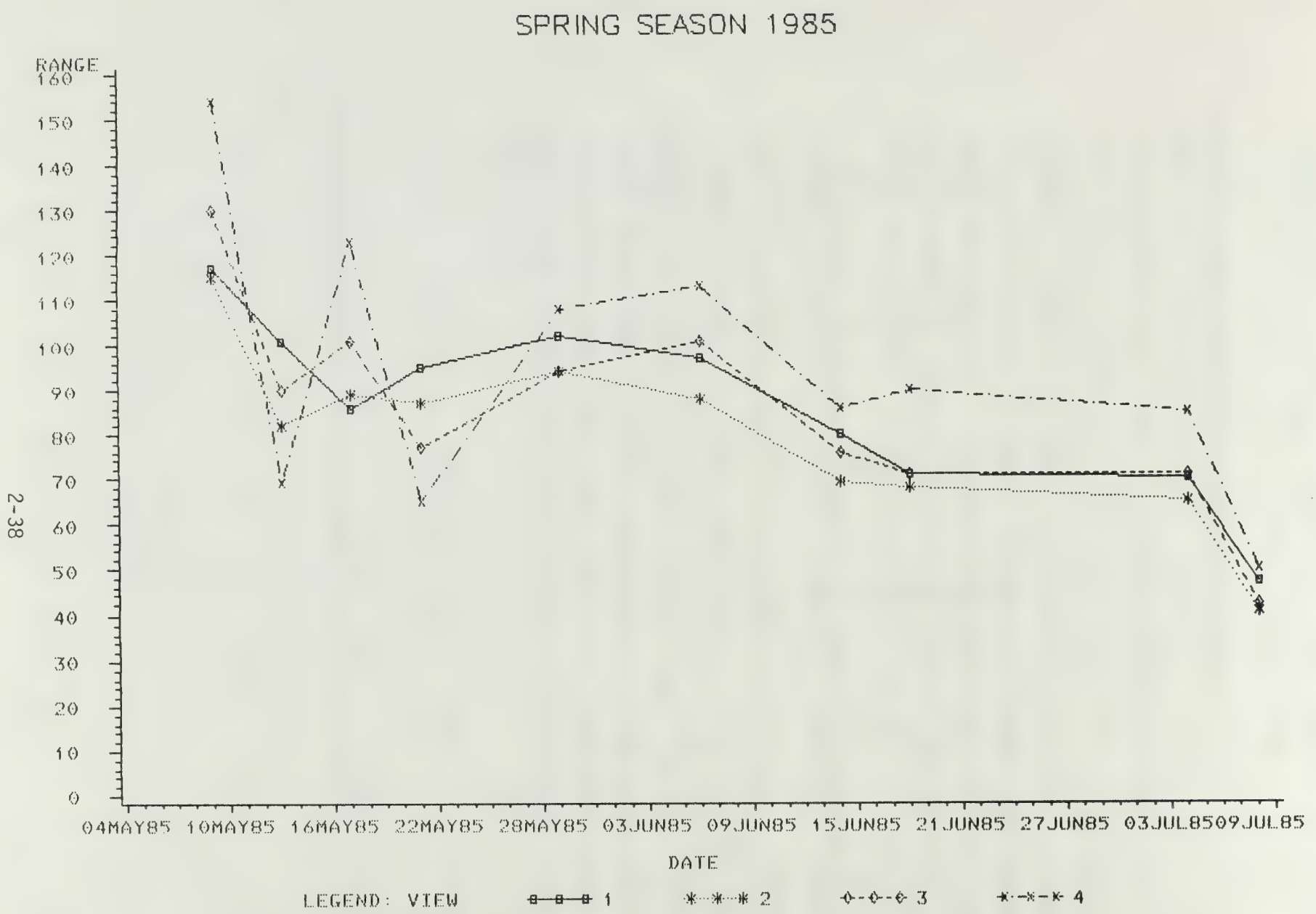


FIGURE 2-5. DAILY MEAN VISUAL RANGE FOR EACH VIEW, SPRING 1985, PICEANCE BASIN.

Table 2-18. Comparison of Visual Ranges in the Piceance Basin (miles) During the Period of Record, Derived from Telephotometric Data.

	Season	View I	View II	View III	View IV	All Views
1975-76	Spring	78	70	82	81	78
	Fall	94	79	84	95	88
	Annual	86	74	83	88	83
1978	Spring	83	75	72	86	79
	Fall	94	77	78	97	87
	Annual	89	76	75	91	83
1979	Spring	82	71	80	118	88
	Fall	99	80	96	132	102
	Annual	90	75	88	125	95
1980	Spring	80	67	78	106	83
	Fall	95	79	83	117	93
	Annual	88	73	80	111	88
1981	Spring	71	66	65	94	74
	Fall	82	73	83	102	85
	Annual	77	69	74	98	80
1982	Spring	79	75	80	108	86
	Fall	94	80	91	120	96
	Annual	86	77	86	114	91
1983	Spring	87	74	73	79	78
	Fall	99	82	85	95	89
	Annual	91	78	79	87	84
1984	Spring	80	75	77	100	83
	Fall	83	70	69	82	76
	Annual	82	73	73	91	80
1985	Spring	87	80	85	94	86
All Years	Spring	81	73	77	96	82
	Fall	93	78	84	105	90
	Annual	86	74	80	101	86

Data for 1975-1976 and 1978 are estimated "equivalent" telephotometric values derived from photographic data (RBOSC MDP Monitoring Report 14).

2.6 SUMMARY

Meteorological data were collected at a site near Tract C-a (Site 1) during 1985. Total suspended particulate data were collected at two sites near Tract C-a (Sites 1 and 3) during 1985.

The second highest TSP concentration measured during 1985 was 32 ug/m^3, and the geometric mean annual TSP concentration for 1985 was 8 ug/m^3 at Site 1 and 9 ug/m^3 at Site 3. The TSP concentration of 32 ug/m^3 is 21 percent of the 24-hr secondary National Ambient Air Quality Standard (NAAQS) while the geometric mean of 9 ug/m^3 is 15 percent of the annual NAAQS. Considering the very low activity level on and around the tract, this result is not surprising. At present, both TSP sites are measuring primarily background concentrations, with little impact due to localized activity. The correlation of the two TSP data sets on an annual basis was high at 0.87.

The meteorological data showed that after two relatively wet years in 1983 and 1984 (total precipitation greater than 20 inches), precipitation returned to a near-average 17 inches. The average temperature was 6.7 ^{o}C, with extreme temperatures of -23.5 and 30.0 ^{o}C. The most common wind directions were south-southwest to west, which has been the case for the entire period of record. Average wind speed at the 10-m level was 6.4 mph during 1985.

Visibility data were only collected during the spring in 1985. The mean visual range during the spring was 86 miles, with daily means varying from 45 to 129 miles. The lowest daily mean visual range of 45 miles was probably a result of long distance transport of fine particles from California fires. There has been no trend evident in the visual range data collected since 1975. Mean visual range over the entire period of record was high at 86 miles.

LITERATURE CITED

Hess, Seymour L. 1959. Introduction to theoretical meteorology, Holt, Rinhart and Winston, NY.

Rio Blanco Oil Shale Project. 1977. Final environmental baseline report for Tract C-a and vicinity. Gulf Oil Corp. and Standard Oil Co. (Indiana).

Rio Blanco Oil Shale Company. 1978. Modular development phase monitoring report 2, December 1977 - May 1978. Gulf Oil Corp. and Standard Oil Co. (Indiana).

_____. 1979a. Modular development phase monitoring report 3, December 1977 - November 1978. Gulf Oil Corp. and Standard Oil Co. (Indiana).

_____. 1979b. Modular development phase monitoring report 4, December 1978 - May 1979. Gulf Oil Corp. and Standard Oil Co. (Indiana).

_____. 1980. Modular development phase monitoring report 5, December 1978 - November 1979. Gulf Oil Corp. and Standard Oil Co. (Indiana).

_____. 1981. Modular development phase monitoring report 7, December 1979 - November 1980. Gulf Oil Corp. and Standard Oil Co. (Indiana).

_____. 1982. Modular development phase monitoring report 9, December 1980 - December 1981. Gulf Oil Corp. and Standard Oil Co. (Indiana).

_____. 1983. Modular development phase monitoring report 11, January-December 1982. Gulf Oil Corp. and Standard Oil Co. (Indiana).

_____. 1984. Modular development phase monitoring report 13, January-December 1983. Gulf Oil Corp. and Standard Oil Co. (Indiana).

_____. 1985. Modular development phase monitoring report 14, January-December 1984. Amoco Corporation.

SECTION 3 TERRESTRIAL STUDIES

3.0 INTRODUCTION

The objectives of the Terrestrial Studies portion of the MDP Environmental Monitoring Program are to conduct monitoring required by the environmental stipulations in the Tract C-a lease, and to detect and evaluate possible changes (as a result of development-related impact) in the vegetative or faunal components of the terrestrial ecosystems on or near Tract C-a.

The sampling program associated with the Terrestrial Studies is geared to the seasonal cycles of the ecosystems involved. The design of the program is based on current knowledge of Tract C-a ecosystems and RBOSC project development plans. As the development of Tract C-a is a pioneering effort, such development plans are subject to frequent modification. The basic knowledge of Tract C-a ecosystems is also increasing. These factors result in frequent changes to the Terrestrial Studies portion as well as other components of the MDP Environmental Monitoring Program.

Further sampling associated with the Terrestrial Studies Program, has been deferred until from six months to a year prior to the beginning of construction on Tract C-a. Therefore, none of the Terrestrial Studies programs was sampled during 1985.

SECTION 4 AQUATIC STUDIES

4.0 INTRODUCTION

The MDP Aquatic Monitoring Program is designed to provide information on the aquatic ecosystems in the vicinity of Tract C-a. The primary purpose of this program is to identify and measure the potential effects on the stream systems that may be the result of oil shale development.

Further sampling associated with the Aquatic Monitoring Program has been deferred until from six months to a year prior to the beginning of construction on Tract C-a. Therefore, none of the Aquatic Studies sampling locations was monitored during 1985.

SECTION 5 HYDROLOGY STUDIES

5.0 INTRODUCTION

During 1985, the hydrology monitoring program focused on Retort Abandonment and the initial retort pumping operation.

The proposed initial pumpout plan was approved by the OSPO April 17, 1985 and the pumpout operation consequently took place during May 1985. A detailed report entitled MIS Retort Abandonment Program, Initial Pumpdown Operation, April-July 1985 was issued to the OSPO in September 1985. The above report discusses abandonment operations such as pumping/flooding strategy, discharge operations and pond operations. The physical setting and the hydraulics of the mine/retort system are explained. Aquifer water level response and water quality analyses are discussed along with the effects of reinjection/discharge on surface water and alluvial aquifers.

This report is a supplement to the initial pumpout report, primarily addressing the post pumpout or recovery phase occurring the latter half of 1985. The 1985 data collected from the lower aquifer, alluvial aquifer, and springs are discussed in the initial pumpout report in their entirety and are not reported herein.

5.1 ON-SITE DATA

For the purpose of this report, on-site water quality analysis (SWQ) can include all or selected parameters of the following: temperature, pH, specific conductance (ec), potassium (K), ammonia (NH_3), fluoride (F), chemical oxygen demand (COD), and alkalinity (Alk). Sulfide and phenol concentrations were consistently below site detection limits and were therefore dropped from the program in September and are not included in this report. Cycle 2 includes data collected from May 1984 through June 10, 1985 (flood/pump phase). Cycle 3 refers to data collected after June 10, 1985 (recovery phase). The retort abandonment monitoring wells are designated by RAM. A master print of all 1985 Retort Abandonment on-site data is listed in Appendix 5.1.1.

A. Upper Aquifer

1. Water levels - After gradually increasing in elevation, the on-site upper aquifer water levels stabilized to their prepumpout levels by the end of 1985. Water levels fluctuated slightly from October through December, up to 2 feet in either direction for most wells. These fluctuations could be due to barometric pressure changes and additional pumping operations (see Section 5.1.2b). Figures 5-1 and 5-2 are water elevation plots for the mine and retort, and Figure 5-3 for RAM-2A shows a typical plot of an on-site monitoring well. For the last week in December the mine and retort water elevation averaged 6728.5 feet and 6727.9 feet, respectively. During this time the near-retort RAM wells (RAM-2, -5 and -6) averaged 6728.0 feet and the outer retort RAM wells (RAM-3 and -4) averaged 6727.9 feet.

2. On-Site Water Quality Analysis

a. Mine water - Mine water was sampled monthly from Borehole 9. Mean on-site data comparing cycles 2 and 3 is as follows:

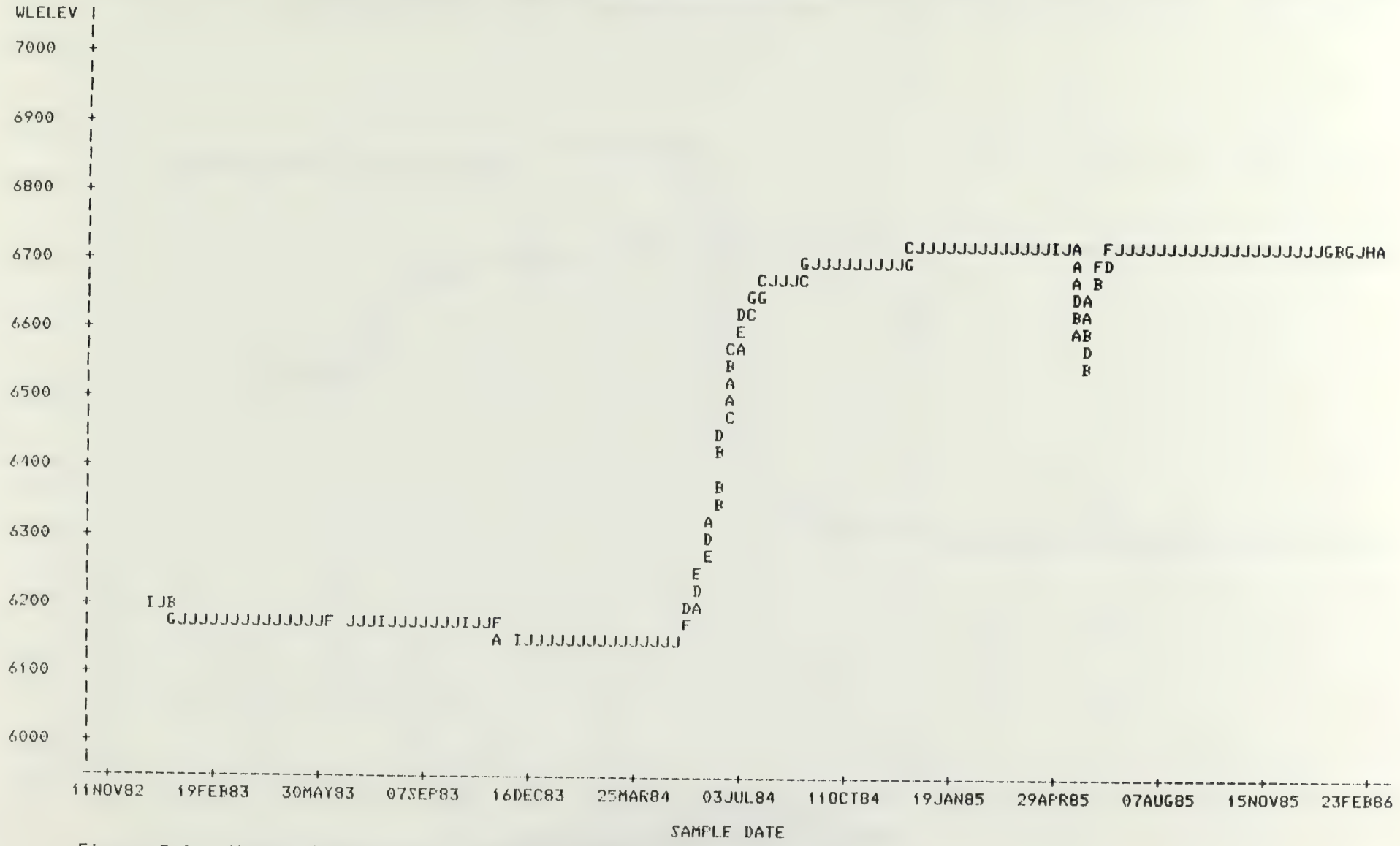


Figure 5-1. Water Elevations in MIS Mine, 1985.

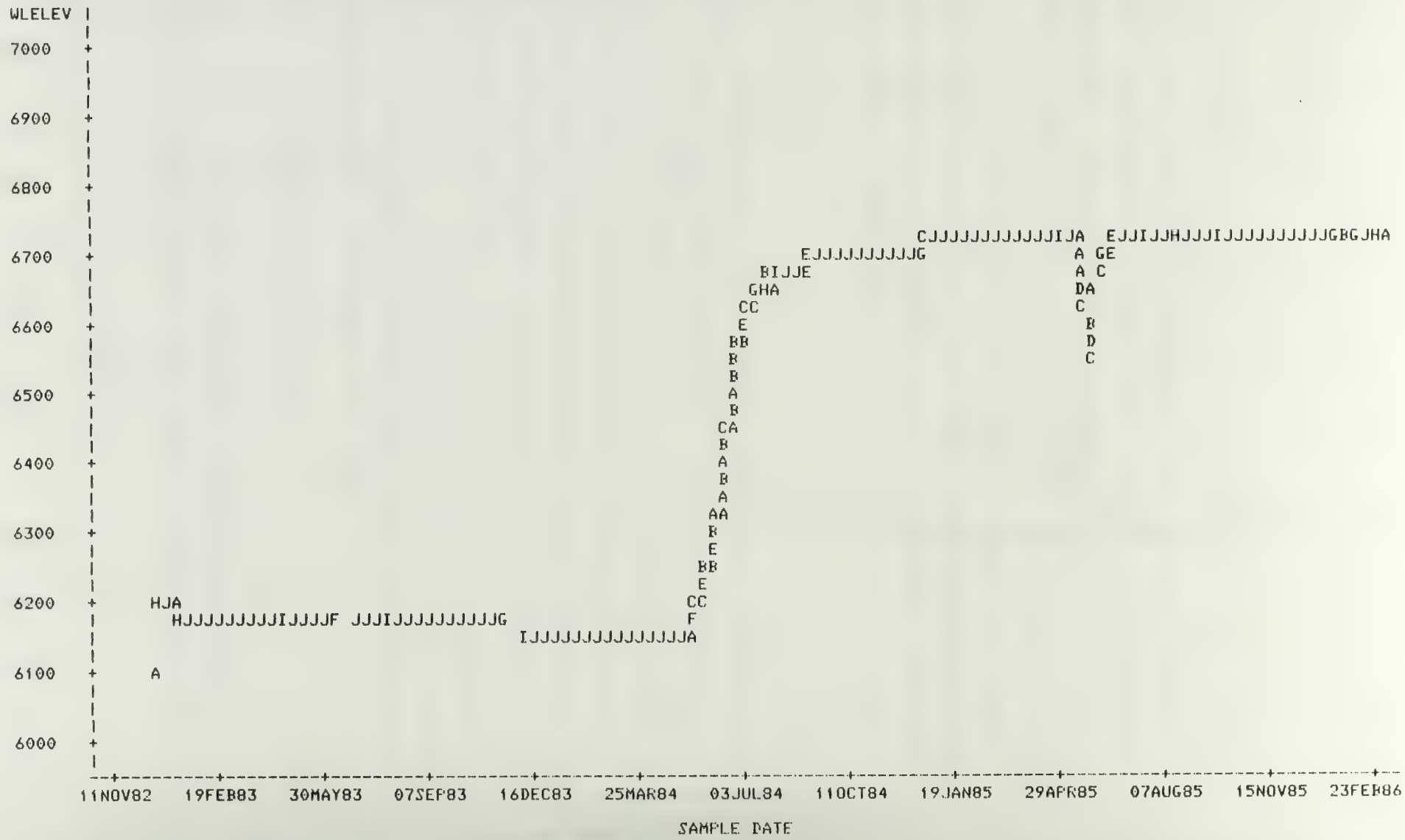


Figure 5-2. Water Elevations in MIS Retort System, 1985.

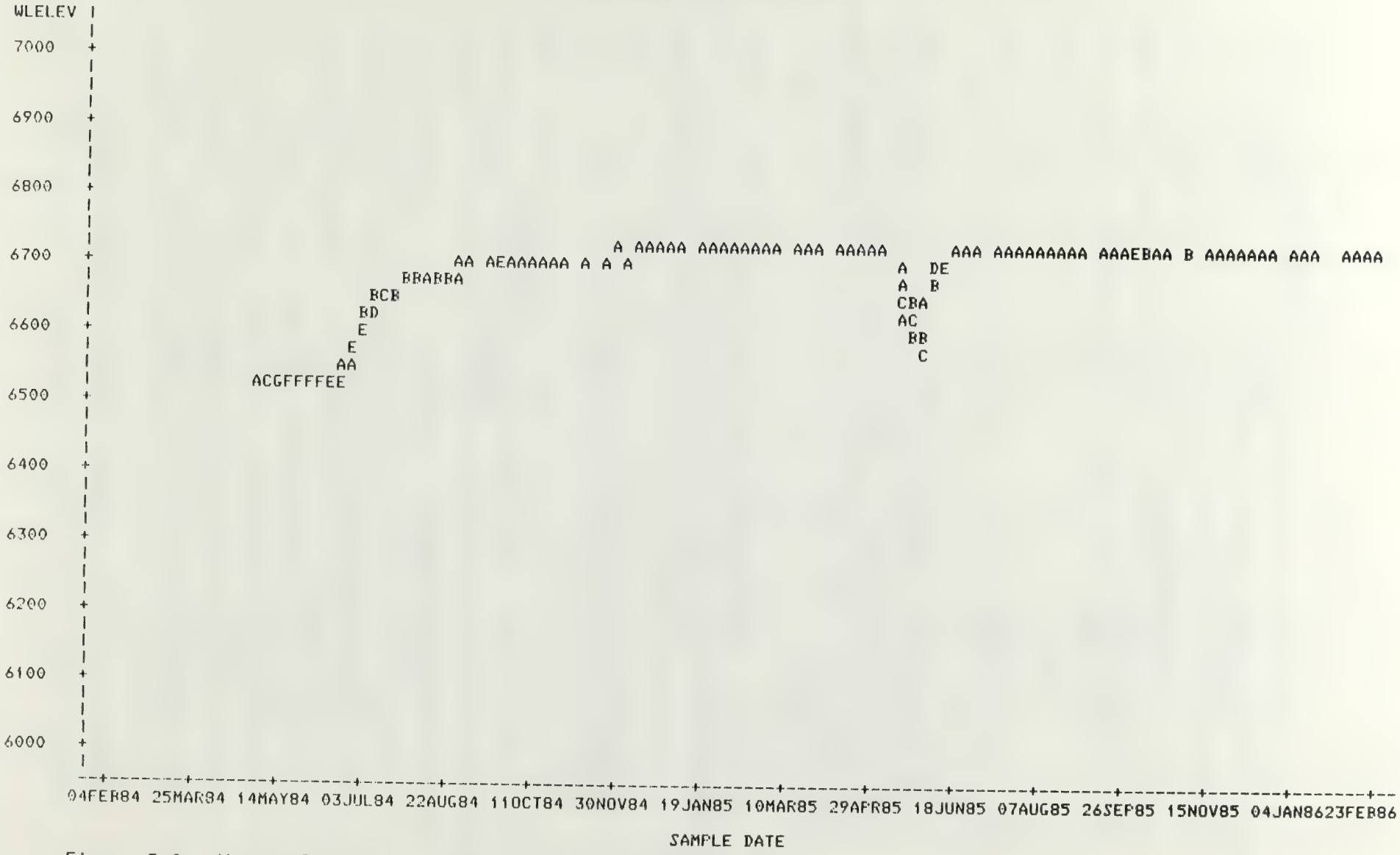


Figure 5-3. Water Elevations in Monitoring Well RAM-2A, 1985.

	Mine Water Means	
	Cycle 2	Cycle 3
Temperature (^{o}C)	15.3	14.3
pH	7.5	8.3
ec (micromhos/cm)	1941	1663
Alk (ug/l)	320	279
NH_3 (ug/l)	<1.0	<1.0
F (ug/l)	1.7	0.7
K (ug/l)	<1.0	<1.0
COD (ug/l)	16.3	14.3

A decreasing trend in conductance is seen during the recovery period, while pH increased somewhat. Other parameters decreased slightly or remained stable. No effects of the MIS retorts are evident in the mine water samples.

b. Retort water - Retort water was collected from RAM-7 monitor wells and the RW-2, RW-5 and RW-6 pumps, the latter two of which were installed in the top portion of Retort 1 in December 1985. Means of data comparing cycles 2 and 3 from the RW-2 pump, located in the collection drift near Retort 1, are listed below:

	RW-2 Means	
	Cycle 2	Cycle 3
Temperature (^{o}C)	33.3	29.9
pH	8.8	8.0
ec (micromhos/cm)	4713	2459
Alk (ug/l)	131	30
NH_3 (ug/l)	6.2	<1.0
F (ug/l)	7.3	3.7
K (ug/l)	550	154
COD (ug/l)	130	28

Concentrations of all parameters analyzed decreased substantially between cycles 2 and 3. The minimum conductivity observation of RW-2

during the recovery period was 1890 umhos/cm on June 15, 1985. An increasing trend was observed through October 1, 1985 when the RW-2 pump was shut off. The final conductivity measurement was 2677 umhos/cm, still significantly lower than the prepump observations. No other significant trends were exhibited during the recovery period, as all other parameters remained stable at their post pumping reduced concentrations.

Means of data comparing cycles 2 and 3 of RAM-7 on-site data are listed in Table 5-1. All means of on-site parameters decreased between cycles 2 and 3 in all completions of RAM-7. Conductance in all of the RAM-7 completions continued to drop significantly for a few days after the retort pumps were shut off, but then began to increase very gradually throughout the recovery period in 1985. The last observations in 1985 in RAM-7A, -7B, -7C, and -7G were 3637, 2762, 2752 and 2575 micromhos/cm, respectively. Potassium and ammonia observations follow the same pattern, however, all three parameters still remained substantially below their prepump concentrations at the end of 1985.

While the water quality since the prepump period improved in RAM-7A (uppermost completion of Retort 1), it still exhibited poorer water quality compared to the three lower completions in the retort. The pH, conductivity, and potassium concentrations remain higher in RAM-7A and conductance observations fluctuate significantly in this completion with no apparent pattern. For this reason, two submersible pumps (RW-5 and RW-6) were installed in the top portion of Retort 1 in an attempt to draw out the poor water from the upper portion of the retort. Pump RW-5, started December 5, is approximately 45 feet below the top of the rubble in Retort 1 and Pump RW-6, started December 4, is approximately 20 feet below the top of the rubble. Collectively they pump approximately 20 gpm into the evaporation ponds. Temperature, pH, conductivity, ammonia, and potassium data is collected daily from these pumps. No appreciable trends were noted. Minimum, maximum and mean values of water from RW-5 and RW-6 are listed:

Table 5-1. On-Site Water Quality Means RAM-7, Cycles 2 and 3

Constituent[1]	RAM-7A		RAM-7B		RAM-7C		RAM-7G	
	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3
Temperature	28.0	22.2	28.5	22.6	28.2	22.4	28.4	22.7
pH	12.4	11.7	11.0	9.1	1.0.	8.8	9.2	8.6
ec	9130	3662	5395	2573	5022	2459	4966	2452
Alk	1643	474	176	31.2	70.5	31.8	45.8	29.7
NH_3	6.4	<1.0	5.2	<1.0	5.0	<1.0	6.9	<1.0
F	1.0	0.5	3.0	2.4	3.1	2.7	4.4	3.8
K	647	137	644	153	618	136	646	158
COD	46.8	13.8	33.1	12.6	31.0	11.0	78.8	36.0

(1) Units: temperature, ^{o}C; pH, standard units; ec, micromhos per cm; others, milligrams per liter.

	RW-5			RW-6		
	Min	Max	Mean	Min	Max	Mean
Temperature (^{o}C)	25.0	32.2	28.6	24.0	32.0	29.5
pH	8.0	10.3	10.1	7.4	8.3	7.6
ec (micromhos/cm)	2728	2998	2885	2594	2868	2722
NH_3 (ug/l)	0.8	1.8	1.2	0.7	1.6	1.2
K (ug/l)	190	215	209	181	193	185

All on-site water quality parameters measured have remained stable in RW-5 and RW-6 throughout their pumping phase. RAM-7A on-site data during this pumping phase is as follows:

	RAM-7A			
	06 Dec	11 Dec	17 Dec	26 Dec
Temperature (^{o}C)	21.8	22.1	22.8	23.5
pH	11.8	12.0	12.0	11.8
ec (micromhos/cm)	6252	3758	3802	3637
NH_3 (ug/l)	1.1	1.0	-	1.4
K (ug/l)	245	200	185	178

It would appear that the conductance and potassium concentrations are decreasing with pumping time, although RW-5 and RW-6 show no increases in these parameters. As stated previously, this completion exhibits erratic water quality and it is probably premature to draw any conclusions about the effectiveness of this supplemental pumping activity.

c. Near-retort RAM wells - Means of on-site water quality constituents collected from the A-groove in the near-retort wells (RAM-2A -5A, and -6A) are compared for cycles 2 and 3 in Table 5-2.

Conductivity, potassium and COD means in all three wells decreased slightly between cycles 2 and 3, while all other parameters remained stable. The potassium concentration in RAM-2A exhibited an increasing

Table 5-2. On-Site Water Quality Means, A-Groove of Near-Retort Wells (RAM-2A, -5A and -6A), Cycles 2 and 3.

Constituent[1]	RAM-2A		RAM-5A		RAM-6A	
	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3
Temperature	16.3	15.1	13.4	12.7	13.5	13.0
pH	7.2	7.2	7.2	7.4	7.3	7.4
ec	2779	2214	1805	1735	1850	1687
Alk	441	422	450	435	454	432
NH_3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
F	1.0	0.8	0.7	0.6	0.8	0.6
K	24.3	10.7	<1.0	<1.0	3.1	<1.0
COD	23.2	14.2	19.9	16.3	20.1	15.2

(1) Units: temperature, ^{o}C; pH, standard units; ec, micromhos per cm; others, milligrams per liter.

trend starting in November. Average potassium concentration from June-October in RAM-2A was 2.8 mg/l, while the November-December average was 33.2 mg/l. This elevated average, however, remains lower than values observed in 1984 from this completion, where a peak potassium observation of 160 mg/l occurred. Also, the potassium concentration peaked in December and has declined, averaging 21.6 mg/l in January, 1986. The three wells exhibit similar water quality, although RAM-2A shows slightly higher conductivity and potassium means, typical of this well. No other trends are apparent in the A-groove of the near-retort wells during the recovery period of 1985.

Means of on-site water quality constituents collected from the B-groove in the near-retort wells (RAM-2B, -5B, and -6B) are compared for cycles 2 and 3 in Table 5-3. Conductivity, potassium, and COD concentrations decreased slightly in the B-groove between cycles 2 and 3, while other parameters remained stable.

The B-groove near-retort wells exhibit comparable water quality and showed no significant individual trends during the recovery period.

Means of on-site water quality constituents collected from the C-groove in the near-retort wells (RAM-2C, -5C, and -6C) are compared for cycles 2 and 3 in Table 5-4. Conductivity and pH means increased slightly in all three wells between cycles 2 and 3, while all other parameters analyzed decrease or remain stable. The three C-groove wells exhibit similar water quality, although RAM-5C shows a slightly higher conductivity mean, typical of this well. The C-groove near-retort wells exhibit no significant trends during the recovery period.

Means of on-site water quality collected from the G-Zone (RAM-2G) are compared using cycles 2 and 3 below:

Table 5-3. On-Site Water Quality Means, B-Groove of New-Retort Wells (RAM-2B, -5B and -6B), Cycles 2 and 3.

Constituent[1]	RAM-2B		RAM-5B		RAM-6B	
	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3
Temperature	16.2	15.3	18.1	16.2	15.8	15.0
pH	7.1	7.2	7.2	7.4	7.3	7.4
ec	2928	2535	3605	2668	2431	2260
Alk	519	499	492	482	438	493
NH_3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
F	1.2	0.9	1.3	0.9	1.3	0.9
K	2.9	<1.0	5.5	1.0	13.1	2.6
COD	17.5	13.5	21.6	18.5	20.1	15.3

(1) Units: temperature, ^{o}C; pH, standard units; ec, micromhos per cm; others, milligrams per liter.

Table 5-4. On Site Water Quality Means, C-Groove of Near-Retort Wells (RAM-2C, -5C and -6C), Cycles 2 and 3.

Constituent[1]	RAM-2C		RAM-5C		RAM-6C	
	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3
Temperature	19.2	18.3	17.5	17.3	16.0	15.8
pH	7.5	7.8	7.6	7.8	7.8	8.1
ec	1586	1662	1840	1954	1431	1596
Alk	558	509	446	441	458	443
NH_3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
F	1.7	1.0	1.8	1.2	2.2	1.5
K	1.9	1.6	2.2	6.0	2.7	<1.0
COD	23.8	13.8	16.2	13.0	21.4	14.4

(1) Units: temperature, ^{o}C; pH, standard units; ec, micromhos per cm; others, milligrams per liter

	RAM-2G Means	
	Cycle 2	Cycle 3
Temperature (^{o}C)	17.9	18.0
pH	7.4	7.7
ec (micromhos/cm)	2006	2329
Alk (mg/l)	516	516
NH_3 (mg/l)	1.6	2.3
F (mg/l)	3.2	4.1
K (mg/l)	19.8	34.0
COD (mg/l)	17.8	17.2

All on-site constituents analyzed increased slightly in RAM-2G between cycles 2 and 3, with the exception of alkalinity and COD. During the beginning of the recovery period (June-July) most constituents increased significantly, probably due to flow from the retort to RAM-2G caused by head differences explained in the initial pumpout report. By the end of 1985, however, the on-site water quality constituents returned to their prepump concentrations.

d. Outer-retort wells - Means of on-site water quality data collected from the A, B, and C-grooves of the outer-retort RAM wells (RAM-3 and -4) during cycles 2 and 3 are listed in Table 5-5. No significant changes occurred between cycles 2 and 3 or between the wells, nor did any trends develop during the recovery period at any of the wells.

e. Off-site wells - Ten off-site wells were monitored for on-site analysis of pH, conductivity, potassium, and ammonia. One sample each was collected just prior to the pumpout (May 7-8) and another was collected at the beginning of the recovery period (June 11-12). Collective means of the data from these wells are as follows:

Table 5-5 On-Site Water Quality Means, Outer-Retort RAM Wells, Cycles 2 and 3.[1]

	A-GROOVE						B-GROOVE				C-GROOVE			
	RAM-1A		RAM-3A		RAM-4A		RAM-3B		RAM-4B		RAM-3C		RAM-4C	
	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3
Temp	10.9	10.4	12.2	11.8	11.5	10.9	13.5	13.4	12.1	11.6	14.1	13.8	12.8	12.5
pH	7.2	7.2	7.3	7.4	7.3	7.5	7.4	7.4	7.4	7.5	8.0	8.1	7.8	7.8
ec	1713	1655	1880	1944	1683	1752	2100	1965	1728	1822	1460	1645	1639	1866
Alk	428	466	445	441	454	411	489	469	466	451	489	481	439	457
NH_3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
F	0.8	0.4	1.1	0.8	0.9	0.6	1.8	1.2	1.4	0.8	2.2	1.6	2.6	1.3
K	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
COD	19.5	17.3	17.1	13.0	19.4	13.3	17.0	14.1	14.1	10.4	40.1	9.0	22.7	24.0

(1) Units: temperature, ^{o}C; pH, standard units; ec, micromhos per cm; others, milligrams per liter

	Off-Site Well Means	
	Cycle 2	Cycle 3
pH	7.9	7.8
ec (micromhos/cm)	1552	1524
NH_3 (mg/l)	<1.0	<1.0
K (mg/l)	<1.0	<1.0

No significant changes occurred between cycles 2 and 3 in these wells as a result of the pumpdown.

B. Surface Water

1. RBOSC monitoring - Surface water sites and on-site parameters monitored by RBOSC during the recovery period of the initial pumpout include:

MET3 - Weekly flow, FWQ, until November, then monthly
BOXFL - Weekly flow, FWQ, until November, then monthly
COFL - Weekly flow, FWQ, until November, then discontinued
SEOFL - Weekly flow, FWQ, until June 13, then quarterly
UPCO - Monthly FWQ beginning November (USGS collects flow data)

Site locations are described in the initial pumpout report. UPCO is a new RBOSC station and is located at USGS gauge station B in upper Corral Gulch, west of the tract. FWQ analysis includes pH, conductivity, ammonia, and potassium. Means of on-site data collected during cycles 2 and 3 for these surface water sites are compared in Table 5-6.

No significant changes occurred in water quality between cycles 2 and 3 at the surface water sites, nor did any trends develop during the recovery period at or between the sites.

Flow means increased slightly at all sites between cycles 2 and 3 except COFL which was biased by continued high flows into June and July from snowmelt. Flow data for MET3 does not include November and December

Table 5-6. On-Site Water Quality and Flow Means, RBOSC Surface Water Sites, Cycles 2 and 3.

Constituent[1]	COFL		MET3		SEOFL		BOXFL		UPCO
	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 2	Cycle 3	Cycle 3
pH	7.8	8.0	7.7	8.0	7.7	7.9	7.7	7.9	7.9
ec	1752	1838	1570	1602	1902	1746	1475	1500	1628
K	1.0	1.1	<1.0	<1.0	1.7	1.3	<1.0	<1.0	1.0
NH_3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
gpm	694	619	1694	1776	2790	2991	911	1075	-

(1) Units: pH, standard units; ec, micromhos per cm; K and NH3, milligrams per liter; gpm, gallons per minute

data, as the data collected by the USGS are not yet available. A typical decreasing trend in flow is seen for all sites in the fall and winter.

2. USGS Monitoring - Three USGS gauge stations monitored surface water during the 1985 water year (October 1984 through September 1985):

Station B (USGS 235) - Upper Corral Gulch, West of Tract
Station D (USGS 242) - Corral Gulch, East of Tract
Station C (USGS 240) - Box Elder Gulch, West of Tract

The streams at these stations were monitored for daily discharge (cubic feet per second), conductivity, and temperature. USGS field data are listed in Appendix 5.1.2. Means of data for the 1985 and 1984 water years are compared below:

	USGS Daily Means					
	Station B		Station D		Station C	
	1985	1984	1985	1984	1985	1984
Discharge (cfs)	2.32	5.05	5.03	9.21	2.50	5.37
ec (micromhos/ cm)	1549	1433	1474	1548	1035	1279
Temperature (^{o}C)	6.52	7.6	9.10	10.3	5.09	8.6

Flow means decreased by approximately 50 percent between the 1984 and 1985 water years, indicating less snowmelt and precipitation during the 1985 water year. Conductivity means decreased slightly at stations D and C and increased slightly at Station B, while temperature decreased at all sites. These changes in temperature and conductivity are insignificant.

Water chemistry data from the 3 surface water stations were collected during the 1985 water year and these data are listed in Appendix 5.1.2. Mean major water chemistry constituents are listed below:

	USGS Water Chemistry Means		
	Station B	Station D	Station C
ec (micromhos/cm)	1570	1580	358
pH	8.2	8.0	8.0
Alk (mg/l)	293	411	87
Kjel N (mg/l)	1.2	0.5	2.1
DOC (mg/l)	14	9	30
Ca (mg/l)	130	105	34
Mg (mg/l)	84.5	86.5	14.0
Na (mg/l)	115	160	19
K (mg/l)	1.8	1.4	9.7
Cl (mg/l)	22.0	16.5	6.6
SO_4 (mg/l)	530	475	84
F (mg/l)	0.25	0.45	-
B (mg/l)	95	145	40

The Box Elder Station (C) only had one observation during the 1985 water year while Stations B and D, in Corral Gulch, had two observations each. The 1985 means are comparable to the 1984 means, except for Station C conductance which exhibited 1180 umhos per cm in 1984 and only 358 umhos/cm in 1985.

5.2 WATER CHEMISTRY ANALYSIS

The purpose of this section is to summarize the water chemistry data collected in the last part of 1985 as part of the MIS retort abandonment program. This summary is to provide an update of 1985 information since the report on retort abandonment was submitted to the BLM/OSPO in September 1985. Detailed statistical and other analyses will be included in subsequent reports to the BLM on the retort abandonment program. In this regard, this section differs from the hydrology section of previous annual monitoring reports. The 1985 water chemistry data are listed in Appendix 5.2.1.

RAM-7 Monitor Wells

The RAM-7 monitor wells are completed in Retort 1 and thus are a major source of data on the effectiveness of the retort abandonment activities. As reported to the BLM in the September 1985 report on the initial pumping operation, appreciable improvement in the water quality in Retort 1 was observed as a result of the pumping operation. This improvement in water quality is summarized in Table 5-7 which lists the means of water quality constituents before the pumpdown and after pumping.

The Table 5-7 means for RAM-7A, located near the top of Retort 1, show a 74.7 percent reduction in specific conductance (conductivity) and 50.7 percent reduction in the concentration of total dissolved solids (TDS) in the post-pumping samples. Most of this reduction in dissolved solids is reflected in reduced concentrations of sodium, potassium, carbonate and hydroxide ions. The concentration of magnesium and sulfate ions were slightly increased after the pumping.

The concentrations of minor constituents (ammonia, sulfides, fluoride, and trace elements) in RAM-7A were also appreciably reduced in the post-pumping samples (Table 5-7). The mean dissolved organic carbon (DOC) was reduced by 69.5 percent as a result of the pumpout.

Table 5.7. Comparison of Pre- and Post-pumping Water Quality Means in RAM-7 Wells, 1985[1]

Constituent	RAM-7A		RAM-7B		RAM-7C		RAM-7G	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Conductivity	10593	2685.0	6801.3	2492.5	6106.3	2345.0	5786.3	2422.5
Tot. Dis. Solids	3429.0	1692.5	5310.4	2022.5	5258.3	1900.0	4863.1	1922.5
pH	12.4	11.3	11.3	8.9	9.9	8.7	8.7	8.8
Alkalinity	2147.3	222.3	298.5	38.3	81.3	47.8	73.8	39.8
Calcium	352.8	251.8	424.3	234.8	450.1	195.0	321.5	205.5
Magnesium	3.6	8.2	2.2	31.3	9.3	52.0	16.3	30.0
Potassium	583.0	105.5	839.1	162.5	793.0	139.3	797.5	185.3
Sodium	631.3	191.8	656.8	208.0	597.0	195.3	600.0	198.8
Chloride	33.3	15.2	36.0	14.7	33.4	13.8	37.9	15.4
Bicarbonate	5.0	5.0	7.8	12.3	16.7	24.3	44.3	17.8
Carbonate	89.4	16.8	40.3	7.1	26.3	7.1	10.7	5.2
Hydroxide	665.9	61.4	79.3	0.5	3.5	0.5	0.5	0.5
Sulfates	892.4	997.0	3182.1	1327.5	3297.8	1245.0	3077.0	1257.5
Sulfide	1.6	0.0	5.2	0.0	3.7	0.0	6.3	0.1
Flouride	0.6	0.4	1.9	2.6	2.0	3.3	2.9	4.5
Ammonia	4.7	0.7	4.6	0.5	4.0	0.4	5.9	0.8
Boron	0.2	0.1	1.4	0.5	1.7	0.5	1.8	0.6
Lithium	0.9	0.3	1.5	0.5	1.5	0.4	1.5	0.5
Molybdenum	0.3	0.2	0.8	0.3	0.7	0.3	0.2	0.2
Dis. Org. Carbon	13.1	4.0	8.8	5.8	9.8	3.0	26.1	8.0

(1) Concentrations are in milligrams per liter except for conductivity (specific conductance) which is in micromhos per cm and pH which is standard units

As presented in the September 1985 report and previously in this report, the concentration of dissolved solids in the retort increased from the time of termination of pumping to the latter part of 1985. This trend, which was fairly rapid initially, continued at much lower rates in the last quarter of the year. This reflects the dissolution of soluble materials in the retort by the aquifer water pulled into the retort by the pumping operation. For example, the specific conductance in RAM-7A in lab samples increased from 2710 micromhos/cm on June 13, 1985 to 3810 in October to 3910 in January 1986. The concentrations of sodium, potassium, carbonate, and sulfate ions account for most of this increase. However, the somewhat increased levels observed in the more recent samples are still low relative to those found in the pre-pumpout samples, which exhibited specific conductance levels of about 10,000 to 12,000 micromhos/cm.

Similar to RAM-7A, the water quality in RAM-7B was significantly improved by the 1985 pumping operation (Table 5-7). The mean specific conductance and TDS were reduced by 63.4 and 61.9 percent, respectively, in the post-pumpout samples. Most of the major ions contributed to this reduction in dissolved solids concentration/sulfate ion concentrations for example were reduced by 58.3 percent. The concentrations of magnesium and bicarbonate ions were slightly increased in the post-pumpout samples.

The concentrations of most of the minor constituents monitored in RAM-7B were reduced by the pumping operation (Table 5-7). The mean fluoride concentration was slightly (0.7 mg/l) higher in the post-pumpout samples for RAM-7B. The mean DOC concentration was reduced by 34.1 percent.

The concentration of dissolved solids in RAM-7B has increased since the pumping operation was terminated. The specific conductance in lab samples has increased from 2390 micromhos/cm on June 13 to 2620 in October to 2920 in January 1986. The TDS in these samples was 1850, 2270, and 2520 mg/l respectively. Most of the major ions have similarly increased. Magnesium, which was appreciably increased just after the

pumping operation, has been observed in decreasing concentrations in the more recent samples.

The dissolved solids concentration in the lower parts of Retort 1 (RAM-7C and RAM-7G) were reduced by over 60 percent, as was observed in RAM-7B. The mean concentration of most of the major ions was reduced in the post-pumpout samples collected in RAM-7C and -7G, however the concentrations of magnesium and fluoride ions were slightly increased (Table 5-7). The concentrations of most of the minor constituents monitored were also reduced by the pumping operation. The mean DOC was reduced by over 69 percent in RAM-7C and -7G.

The post-pumping water quality and trends in RAM-7C and -7G were comparable to those observed in RAM-7B. The total dissolved solids concentrations in RAM-7G have tended to be lower than was observed in either -7B or -7C, largely due to somewhat lower concentrations of calcium and sulfate ions. The DOC concentration has been greater in RAM-7G, as has always been the case.

B. Aquifer Monitor Wells

For the retort abandonment program, five wells have been completed for the purpose of monitoring the potential water quality effects. The location and construction of these wells has been described in previous reports to the BLM/OSPO and will not be repeated here. Near-retort wells are RAM-2,-6, and -5; monitor wells more distant from the retorts are RAM-3 and -4. Each of these wells has separate completions in the A-groove, B-groove, and C-zone. RAM-2 also has a G-zone completion. In the following paragraphs, each of these hydrologic zones for the various monitor wells is discussed separately.

1. A-groove Monitor Wells

The TDS in the A-groove monitor wells (Table 5-8) remained above the upper aquifer (pre-1981) mean of 1145 mg/l. The TDS in RAM-2A was slightly above the upper aquifer 90 percent confidence level of

Table 5.8. Comparison of Pre- and Post-Pumping Water Quality Means in A-Groove Monitor Wells, 1985.[1]

Constituent	RAM-2A		RAM-5A		RAM-6A		RAM-3A[2]		RAM-4A[2]	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Conductivity	2847.5	2168.0	1879.6	1698.0	1930.0	1660.0	1991.0	2200.0	1742.0	1720.0
Tot. Dis. Solids	2639.4	1756.0	1434.8	1252.0	1536.2	1240.0	1585.4	1570.0	1298.6	1300.0
pH	7.0	7.7	7.7	7.7	7.7	7.7	7.6	7.7	7.6	7.6
Alkalinity	404.5	534.0	476.2	465.8	487.2	467.2	494.0	481.0	487.0	443.0
Calcium	259.8	188.0	148.6	128.0	143.4	115.6	167.0	145.0	125.4	135.0
Magnesium	185.8	135.0	109.6	98.0	113.6	100.2	118.6	119.0	102.6	95.0
Potassium	31.5	5.8	1.0	0.6	6.7	0.6	0.6	1.4	0.5	0.4
Sodium	224.5	160.8	142.6	133.6	161.8	131.2	147.8	196.0	136.8	129.0
Chloride	17.6	14.6	17.5	17.0	16.8	16.9	14.6	17.8	19.4	18.7
Bicarbonate	526.9	616.6	547.6	536.4	551.6	539.0	567.4	553.0	559.2	512.0
Carbonate	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Hydroxide	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sulfates	1523.8	849.0	618.2	561.2	702.8	540.2	734.0	804.0	534.8	579.0
Sulfide	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Flouride	0.6	0.6	0.2	0.4	0.5	0.5	0.6	0.6	0.5	0.5
Ammonia	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Boron	0.4	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.1
Lithium	0.3	0.2	0.1	0.1	0.2	0.1	0.2	0.3	0.1	0.2
Molybdenum	0.2	0.2	0.4	0.5	0.4	0.5	0.2	0.3	0.8	1.1
Dis. Org. Carbon	6.3	9.6	7.8	7.2	8.5	7.8	8.6	14.0	8.3	18.0

(1) Concentrations are in milligrams per liter except for conductivity (specific conductance) which is in micromhos per cm and pH which is standard units

(2) Single sample

1732 mg/l while the other A-groove wells were less than this concentration after the pumpout operations. The relatively high salinity in RAM-2A is largely attributable to calcium and sulfate concentrations which exceed the upper aquifer 95 percent confidence level.

The RAM-2A monitor well, located to the southeast of Retort 1, exhibited improved water quality after the 1985 pumping operation as shown by the water quality means listed in Table 5-8. The mean specific conductance was reduced by 23.9 percent and the TDS was reduced by 33.5 percent in the post-pumping samples. All of the major cations and sulfate ions were reduced. The bicarbonate (and alkalinity) was higher in the post-pumpout samples. The DOC was also slightly increased but is still comparable to the upper aquifer concentrations. The minor constituents monitored were largely unchanged, although some of the means were lower than the pre-pumping means. The levels of these constituents remain relatively low as expected in the upper aquifer.

RAM-2A exhibited a slight increasing trend in dissolved solids after the pumping operation was terminated. The TDS concentration was 1710 mg/l on June 18, 1890 mg/l in October and 1910 mg/l in January 1986. Sulfate, sodium, and perhaps potassium concentrations explain most of the change in dissolved solids. Ammonia and boron concentrations may also be increasing but the concentration of these constituents is low.

RAM-6A, located to the east of Retort 1, also exhibited improved water quality in the post-pumpout samples but the change was not as much as that observed in RAM-2A (Table 5-8). The mean TDS declined 19.3 percent relative to the pre-pumping mean. Calcium, sodium, and sulfate ions were reduced in the post-pumping samples. The minor constituents and DOC were not greatly affected by the pumping operation. The water quality in RAM-6A has not changed appreciably since the termination of pumping.

The TDS in RAM-5A, located to the north of Retort 1, was reduced by the pumping operation but not as much as was observed in either of the other two near-retort A-groove wells. The post-pumping mean TDS and specific

conductance were reduced by 12.7 and 9.7 percent, respectively. Calcium and sulfate ions appeared to account for most of the improved TDS. The minor constituents and DOC were essentially unchanged in RAM-5A as a result of the pumping operation. No appreciable trend in water quality have been observed in this monitor well since the termination of pumping.

RAM-3A is located to the east of the retorts but more distant from the retorts than RAM-6A. A single sample was collected for the post-pumpout period in 1985. This sample indicated that the water quality was not greatly changed from the pre-pumpout period (Table 5-8). A single post-pumpout sample was also collected from RAM-4A, located still farther to the east of the retorts. As for RAM-3A, no appreciable changes were indicated. The DOC was somewhat greater than the pre-pumping mean (Table 5-8) and greater than the upper aquifer mean of 11.7 mg/l.

2. B-groove Monitor Wells

RAM-2B exhibited improved water quality in the 1985 post-pumpout period, with mean reductions in specific conductance and TDS of 17.3 and 24.1 percent respectively (Table 5-9). Most of the major ions were reduced at least to some extent. The minor constituents were not greatly affected by the pumping operation. The DOC concentration was reduced by the pumping operation but was fairly low even before the pumpout. RAM-2B has shown a slow increase in dissolved solids since the termination of pumping. The TDS in RAM-2B was 1950 mg/l on June 18, 2330 mg/l in October, but was 2200 mg/l in January 1986 (greater than the upper aquifer (pre-1981) 95 percent confidence level of 1995 mg/l).

The water quality in RAM-6B was also improved in the 1985 post-pumping period (Table 5-9) but not to the extent observed in RAM-2B. The mean specific conductance was reduced by 5 percent and the mean TDS was reduced by 10.3 percent. Most of the major ions were at lower concentrations in the post-pumping period. The mean DOC concentration was increased slightly over the pre-pumping period largely due to one

Table 5.9. Comparison of Pre- and Post-pumping Water Quality Means in B-Groove Monitor Wells, 1985[1]

Constituent	RAM-2B		RAM-5B		RAM-6B		RAM-3B		RAM-4B	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post[2]	Pre	Post[2]
Conductivity	3061.0	2530.0	3905.0	2730.0	2510.0	2384.0	2204.0	2120.0	1600.8	1710.0
Tot. Dis. Solids	2757.6	2092.0	3769.9	2296.0	2084.6	1870.0	1729.2	1610.0	1182.0	1250.0
pH	7.7	7.6	7.7	7.7	7.8	7.7	7.8	7.6	7.9	7.8
Alkalinity	541.7	538.6	521.2	530.8	511.1	528.2	518.0	505.0	512.7	477.0
Calcium	232.8	161.0	334.4	177.8	134.9	113.6	106.6	114.0	79.7	95.0
Magnesium	220.9	191.8	269.8	194.0	185.3	184.8	154.2	152.0	92.3	100.0
Potassium	2.5	1.3	5.7	2.2	15.2	4.2	1.2	0.9	0.9	0.4
Sodium	255.6	209.0	370.0	250.0	223.9	205.8	213.6	192.0	177.5	158.0
Chloride	11.9	10.7	14.8	13.1	17.0	17.1	13.1	16.1	9.3	13.6
Bicarbonate	622.5	620.4	599.4	602.4	589.6	609.6	603.6	580.0	602.0	553.0
Carbonate	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Hydroxide	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sulfates	1489.5	1102.0	2202.7	1262.0	1082.3	961.8	852.2	854.0	447.8	551.0
Sulfide	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Flouride	0.8	0.9	0.9	1.0	0.9	0.9	0.9	1.1	0.8	0.7
Ammonia	0.5	0.3	0.5	0.3	0.6	0.4	0.3	0.3	0.2	0.3
Boron	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.1
Lithium	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.3
Molybdenum	0.3	0.5	0.3	0.5	0.1	0.1	0.2	0.3	0.1	0.1
Dis. Org. Carbon	7.7	6.0	8.7	8.6	6.7	10.4	7.8	11.0	6.5	13.0

(1) Concentrations are in milligrams per liter except for conductivity (specific conductance) which is in micromhos per cm and pH which is standard units

(2) Single sample

observation (right after the termination of pumping) of 30 mg/l. Other DOC analyses were appreciably lower. The minor constituents were not greatly affected by the pumping operation. No consistent trends are evident in the water quality data collected in RAM-6B after the pumping activities in 1985.

Of the near-retort B-groove monitor wells, the water quality in RAM-5B was the most improved in the post-pumpdown samples. The mean specific conductance and TDS were reduced by 30.1 and 39.1 percent respectively, relative to pre-pumping means (Table 5-9). Most of the major ions contributed to this reduction in dissolved solids, although the alkalinity system was little affected by the pumping operation. Also, the concentration of the minor constituents was not appreciably affected by the pumpdown. The dissolved solids concentration in RAM-5B has increased slightly since the termination of the pumping operation. The TDS was 2210 mg/l on June 18, 2430 mg/l in October and 2700 mg/l in January 1986.

The water quality in the more distant monitor wells (RAM-3B and -4B) were not greatly changed after the pumping operation (Table 5-9). The TDS was reduced slightly in RAM-3B and increased slightly in RAM-4B, but the level of change was less that 7 percent in both wells. The DOC concentration was greater in the single 1985 post-pumping samples than the mean pre-pumping concentration.

It should be noted that the post-pumping water quality in near-retort wells is fairly poor relative to the overall upper aquifer. The specific conductance and TDS in RAM-2B, -5B, and -6B exceeds the upper aquifer 95 percent confidence level, due largely to relatively high calcium, magnesium and sulfate concentrations. RAM-3B calcium and magnesium concentrations also exceed the upper aquifer 95 percent level.

C-Zone Monitor Wells

The water quality in RAM-2C and RAM-5C was slightly improved in the 1985 post-pumping period (Table 5-10). However, the changes in the means

Table 5-10. Comparison of Pre- and Post-pumping Water Quality Means in C- and G-Zones, 1985[1]

Constituent	RAM-2C		RAM-5C		RAM-6C		RAM-3C[2]		RAM-4C[2]		RAM-2G	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Conductivity	1662.0	1608.0	2034.0	1942.0	1388.0	1542.0	1484.0	1610.0	1556.0	1780.0	2006.9	2552.0
Tot. Dis. Solids	1177.8	1100.0	1570.6	1412.0	921.0	1036.0	1005.2	1080.0	1044.6	1230.0	1459.5	1792.0
pH	8.0	8.1	8.0	8.1	8.2	8.3	8.0	8.6	8.1	7.9	7.9	8.1
Alkalinity	592.8	545.6	484.0	470.4	505.4	508.2	500.8	502.0	461.0	457.0	553.5	580.8
Calcium	57.6	55.4	111.2	72.0	26.0	27.6	26.4	22.0	36.6	57.0	64.5	54.0
Magnesium	108.0	95.0	127.4	110.0	52.6	73.2	78.0	70.0	63.4	96.0	105.9	77.8
Potassium	1.6	3.5	1.6	12.5	2.2	2.1	0.6	1.1	0.7	0.4	11.4	62.0
Sodium	189.4	186.4	205.8	226.0	221.8	231.2	210.6	248.0	234.0	223.0	259.3	411.6
Chloride	10.4	10.7	11.8	12.4	12.9	12.0	11.7	13.8	9.5	10.2	11.2	14.8
Bicarbonate	688.8	636.4	559.4	529.8	549.6	586.8	584.0	548.0	531.8	531.0	640.3	670.2
Carbonate	1.0	1.0	1.0	2.4	5.7	2.4	1.0	16.0	2.3	1.0	1.0	1.0
Hydroxide	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sulfates	397.4	408.6	765.4	687.6	288.6	373.0	346.8	389.0	399.6	600.0	635.3	846.2
Sulfide	0.0	0.0	0.0	0.0	0.3	0.0	15.4	1.8	9.6	3.6	0.1	0.0
Flouride	1.1	1.0	1.1	1.2	1.4	1.5	1.4	1.6	1.4	1.4	2.2	5.6
Ammonia	0.4	0.4	0.2	0.5	0.2	0.2	0.3	0.2	0.6	0.3	0.8	4.4
Boron	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.1	0.3	0.4
Lithium	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.3	0.2	0.3	0.2	0.2
Molybdenum	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Dis. Org. Carbon	9.4	11.4	5.5	6.2	6.8	4.6	6.6	16.0	5.3	9.0	8.5	10.8

(1) Concentrations are in milligrams per liter except for conductivity (specific conductance) which is in micromhos per cm and pH which is standard units

(2) Single sample

were generally very low. For example, the mean specific conductance in these two monitor wells was reduced by less than 5 percent. Although the concentration of most of the major ions was somewhat reduced or not greatly changed by the pumping operation, the mean potassium concentration was increased in both RAM-2C and RAM-5C in the post-pumpout period. The changes in the minor constituents and in DOC were not appreciable in these two wells.

The greatest change in potassium concentration in RAM-2C and RAM-5C occurred right after the cessation of pumping of the retort system. In RAM-2C, the pre-pumping potassium concentration of 1.9 mg/l increased to 3.2 mg/l in the June 19 sample; the comparable samples in RAM-5C exhibited a change from 1.6 to 17 mg/l. The potassium concentrations have more recently declined, with January 1986 samples having 2.3 and 5.2 mg/l K in RAM-2C and -5C, respectively. Overall, the water quality in these two wells did not change much in 1985 after the completion of the pumping operation.

Contrary to the slightly decreased dissolved solids observed in the other two near-retort wells, the dissolved solids in RAM-6C was slightly increased in the post-pumping samples. The mean specific conductance and TDS were increased by 11.1 and 12.5 percent, respectively, relative to the pre-pumping means (Table 5-10). Most of the change was related to increased concentrations of magnesium, bicarbonate, and sulfate ions. The other constituents monitored were not greatly affected by the pumping operation nor has the water quality changed appreciably since the termination of pumping.

The single 1985 post-pumping samples collected from RAM-3C and -4C showed somewhat increased dissolved solids relative to the pre-pumping means (Table 5-10). The TDS in these two wells was up by 7.4 and 17.7 percent, respectively. The increase in RAM-3C was due to increases in the concentration of sodium, bicarbonate, and sulfate ions, while in RAM-4C, calcium, magnesium, and sulfate ions increased in the post-pumping sample. Most of the minor constituents were not greatly changed in the post-pumping samples, although the sulfide concentrations

were reduced in both wells. The DOC concentration was increased in the post-pumping samples.

G-Zone

The water quality in RAM-2G was improved by the pumping operation. The mean specific conductance and TDS were reduced by 21.4 and 18.6 percent, respectively, in the post-pumping samples (Table 5-10). Most of the major ions contributed to this decrease, although the mean concentration of calcium and magnesium ions was increased in the post-pumping period. While the concentration of fluoride ions and ammonia declined in the post-pumping samples, the other minor constituents (as well as DOC) were not greatly affected by the pumping operation.

Although the water quality in RAM-2G improved after the pumpout, the water quality initially after the pumping was poorer than just before the pumping was started. The concentrations of sodium, potassium, fluoride, sulfate, ammonia, and boron ions were appreciably increased in the initial samples collected after the pumping was terminated. The concentration of these constituents has since dropped to levels comparable to the pre-pumping water quality. This pattern of water quality is due to short term head difference of several feet, causing flow from the retort toward RAM-2G. After this, when head differences declined and then the gradient reversed, the poorer quality water dispersed.

C. Retort Pumping

In December 1985, pumps (RW-5 and -6) were installed in coreholes completed in the upper part of Retort 1. Initial water chemistry samples (Table 5-11) showed water quality somewhat better than that found in the RAM-7 wells in Retort 1. This pumping program is continuing in 1986.

Table 5-11. Initial water quality from RW-5 and RW-6 pumps located in the upper section of Retort 1, December 1985[1]

Constituent	RW-5	RW-6
Conductivity	2320.0	2460.0
Tot. Dis. Solids	1790.0	1980.0
pH	7.6	7.7
Alkalinity	200.0	141.0
Calcium	160.0	190.0
Magnesium	98.0	83.0
Potassium	65.0	98.0
Sodium	207.0	218.0
Chloride	19.0	18.0
Bicarbonate	218.0	150.0
Carbonate	1.0	1.0
Hydroxide	0.5	0.5
Sulfates	1130.0	1250.0
Sulfide	<0.02	<0.02
Flouride	1.8	1.8
Ammonia	7.0	1.26
Boron	0.3	0.4
Lithium	0.3	0.3
Molybdenum	0.2	0.2
Dis. Org. Carbon	20.0	10.0

(1) Concentrations are in milligrams per liter except for conductivity (specific conductance) which is in micromhos per cm and pH which is standard units

5.3 SUMMARY

During 1985, the hydrology monitoring program focused on retort abandonment and on the initial retort pumping operation in May 1985. Section 5 updates the report on this operation, submitted to the BLM/OSPO in September 1985.

In the latter part of 1985, water levels rose gradually, stabilizing at prepumpout levels. Water quality in the retort system was appreciably improved by the pumpout operation. Water quality on the upper portion of Retort 1, as measured in well RAM-7A, remained poor (higher specific conductance and pH) relative to other retort sections. Pumps (RW-5 and -6) were installed in December to specifically pump the upper portion of the retort. Overall the water quality of these pumped waters was stable through the end of the year.

Near-retort water quality was also somewhat improved by the pumpout operation although the C- and G-zone wells exhibited some increased specific conductance levels. RAM-2A exhibited increased potassium concentrations in November but these declined later in the year. Most of the near-retort wells exhibited no significant trends during the recovery period.

Monitor wells located away from the retort area showed no water quality effects of the retorts or pumpout activity. Surface water quality was similarly unaffected.

6.0 INTRODUCTION

In addition to the monitoring programs which have been reported in the previous sections of this report, RBOSC is conducting special studies in the following areas:

- Experimental Revegetation
- Shrub Growth Enhancement
- Comparison of Inhalable and Total Suspended Particulates
- Run-of-Mine Lysimeters

The activities during the 1985 reporting year in these areas are included in the Special Studies - Ecological Interrelationships section. The efforts included in this section are designed to examine means of mitigating development-related impacts by examining the relationships between the components of the ecosystems involved. The end result of these studies will be an increased understanding of the feasibility of modifying one ecosystem component (such as vegetative community physical structure and phytosociology) to produce a desired effect on another ecosystem component (such as wildlife). Studies directed at altering natural succession after fire which were scheduled for completion in 1985 were unexpectedly terminated because the study area in Yellow Creek was drastically disturbed. All fences and grazing exclosures were removed by persons unknown.

6.1 REVEGETATION

A. Experimental Revegetation on Surface Disturbed Sites

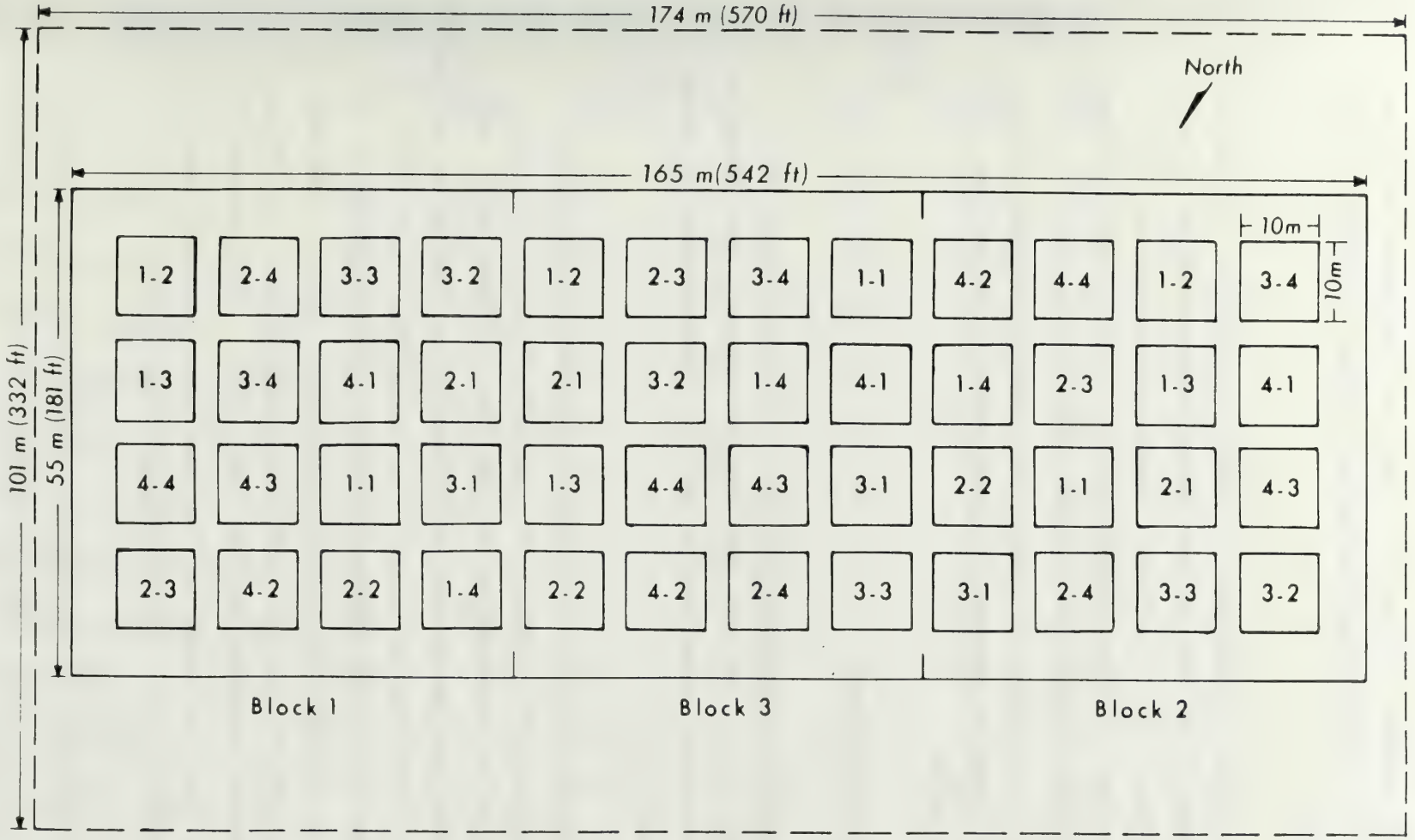
1. Objectives

The development of oil shale facilities on Tract C-a will result in disturbed lands which will be revegetated once disturbance ceases. Experiments were initiated during 1975 to demonstrate reclamation feasibility and species adaptability with varying mulch types, fertilizer applications and plot aspects.

2. Methods

Experimental plots were constructed at two locations in the southeast corner of Tract C-a; Plot R-1 was located on a northwestern exposure and Plot R-2 was located on a southeastern exposure. Surface disturbance at each site included stripping topsoil and subsoil, ripping the underlying rock substrate, and then replacing the subsoil and topsoil. Subsequent to these activities, the sites were seeded, mulched and/or fertilized using a total of 16 treatment combinations, with three replicates of each treatment applied at each site in a randomized block design. The configuration for Plot R-1 is illustrated in Figure 6-1. Additional information on methods is presented in Section 2.5.3.2 of Progress Report 4 (RBOSP 1975) and in Revegetation Annual Reports (RBOSC 1977, 1978, 1979).

Cover estimates within each treatment combination on Plots R-1 and R-2 were made within four m^2 quadrats (numbered 1-4) during 1976, 1977, 1978, 1980 and 1981. Biomass was determined within each of these same quadrats, in both 1978 and 1981, by clipping and drying the aboveground standing crop after cover estimates were made. Shrub species, however, were not clipped in 1981. In order to assess cover on quadrats undisturbed by previous clipping, four undisturbed quadrats were randomly selected in 1982 and sampled from 1982 through 1985 in each of the 16 treatment combinations, within each block on Plots R-1 and R-2. These



Seeding Rate 18 kg/ha (16 lbs/acre)

Mulch Treatments
(First Numeral in Treatment Designation)

1=No Mulch
2=Hydromulch
3=Straw Mulch Followed by Crimping
4=Straw Mulch With Netting

Fertilizer Treatments:
180 kg/ha, 10-5-5)
(Second Numeral in Treatment Designation)

1=No Fertilizer
2=Fertilizer at Time of Sowing
3=Fertilizer at Beginning of First Full Growing Season
4=Fertilizer at Sowing & Beginning of First Full Growing Season

Figure 6-1. Treatment Configuration for Experimental Revegetation Plot R1, Tract C-a.

new quadrats were numbered 5-8, and will serve as the sample locations where cover will be estimated and aboveground biomass determined during subsequent years.

In order to facilitate an assessment of grazing pressure on the experimental revegetation plots, fencing was removed from two-thirds of each site during May 1984. For R-1, Block 1 remains fenced and for R-2, Block 3 remains fenced. In May 1985 the four 10 x 10 m plots adjacent to the aforementioned blocks were refenced to exclude grazing. In subsequent years, the impacts of grazing the revegetated areas from two to several years could be assessed by successively refencing portions of the revegetation sites.

3. Results and Discussion

a. Experimental Revegetation Plot R-1 - Cover estimates for species occurring on Plot R-1 were made between August 21 and September 3, 1985. These data are summarized in Table 6-1 and presented in their entirety in Appendix 6-1.1.

Cover for all species over the 16 treatment combinations ranged from 37.2 to 49.1 percent, with a mean of 41.1 percent (Table 6-1). The highest total cover was encountered on plots that had straw mulch held in place by netting, and which were fertilized both at sowing and at the beginning of the first growing season. The lowest total cover was exhibited on those plots with hydromulch and fertilizer applied at sowing as well as the beginning of the first growing season. The mean cover of 41.1 percent recorded for 1985 decreased markedly over the mean cover of 63.2 percent recorded for 1984 (Table 6-2). This decrease is largely related to planted grass and forb species and probably results from grazing impacts as well as decreased moisture availability.

Planted grasses averaged 16.7 percent cover during 1985 and accounted for 40.6 percent of the total plant cover averaged over all treatment combinations. Cover of invader grasses averaged 2.6 percent, which represented a marked increase from that recorded in 1984. When compared

TABLE 6-1. MEAN COVER (%) OF PLANTED AND INVADED GRASSES, FORBS, AND SHRUBS FOR EXPERIMENTAL REVEGETATION PLOT R-1 SAMPLED DURING THE CURRENT REPORT YEAR, 1985.

TREATMENT COMBINATION	GRASSES PLANTED	GRASSES INVADED	FORBS PLANTED	FORBS INVADED	SHRUBS PLANTED	SHRUBS INVADED	TOTAL COVER
NO MULCH NO FERTILIZER	16.2	2.8	15.3	0.8	5.0	0.3	40.3
NO MULCH FERTILIZER-SOWING	15.6	5.3	19.1	0.8	6.4	0.3	47.5
NO MULCH FERTILIZER-1ST GROWING	22.4	1.0	13.0	1.1	6.5	.	44.0
NO MULCH FERTILIZER-SOWING/1ST GROWING	13.3	0.8	16.8	0.6	7.1	0.7	39.2
HYDROMULCH NO FERTILIZER	15.4	1.6	14.6	1.3	5.4	0.3	38.6
HYDROMULCH FERTILIZER-SOWING	11.8	3.2	15.7	2.5	8.2	0.1	41.4
HYDROMULCH FERTILIZER-1ST GROWING	19.2	5.0	10.8	0.5	12.6	0.3	48.4
HYDROMULCH FERTILIZER-SOWING/1ST GROWING	12.8	5.5	11.8	0.8	6.1	0.3	37.2
STRAW-CRIMPING NO FERTILIZER	15.8	.	12.7	0.9	9.0	0.3	38.7
STRAW-CRIMPING FERTILIZER-SOWING	13.3	2.6	16.3	1.7	7.0	.	40.8
STRAW-CRIMPING FERTILIZER-1ST GROWING	9.2	3.8	13.5	2.5	3.8	0.5	33.2
STRAW-CRIMPING FERTILIZER-SOWING/1ST GROWING	17.8	1.7	12.0	1.6	5.7	0.4	39.1
STRAW-NETTING NO FERTILIZER	22.2	0.2	12.7	1.3	3.8	0.3	40.4
STRAW-NETTING FERTILIZER-SOWING	16.8	4.4	12.4	0.9	6.3	.	40.8
STRAW-NETTING FERTILIZER-1ST GROWING	21.8	0.2	14.0	0.6	2.0	0.7	39.2
STRAW-NETTING FERTILIZER-SOWING/1ST GROWING	23.1	3.3	11.4	0.4	9.8	1.1	49.1
MEAN COVER	16.7	2.6	13.9	1.1	6.5	0.3	41.1

Table 6-2. Comparison of Mean Cover (%) Among Years for All Treatment Combinations on Experimental Revegetation Plot R-1, Tract C-a

Growth Form	Year								
	1976	1977	1978	1980	1981	1982[1/]	1983[1/]	1984[1/]	1985[1/]
Grasses Planted	5.9	12.2	10.9	18.4	20.7	21.3	41.9	27.1	16.7
Grasses Invaded	2.5	0.1	0.5	3.4	3.5	4.1	7.0	0.0	2.6
Forbs Planted	3.6	4.1	1.7	9.8	10.6	16.1	23.8	27.2	13.9
Forbs Invaded	10.2	23.4	20.9	6.0	4.5	3.4	4.5	1.5	1.1
Shrubs Planted	2.1	3.3	3.7	3.0	2.7	4.4	7.3	6.7	6.5
Shrubs Invaded	0.0	0.0	0.1	0.1	0.8	0.4	0.8	0.7	0.3
TOTAL	24.5	43.1	37.8	40.7	42.8	49.8	85.2	63.2	41.1

1/ Data are based on cover estimates from sample quadrats established in 1982.

to data for the period 1976-1984, cover of planted and invader grasses in 1985 was closest to that recorded in 1980. Precipitation measured during 1980 and 1985 was similar (6.76 vs. 7.22 inches, respectively, for the May to October growing season.) Consequently, it appears that the precipitation during the growing season is a strong determinant of total plant cover. Although grasses may have responded to increased moisture in 1983, the increase in cover noted for 1983 was not maintained during 1984 and has decreased further in 1985.

Highest cover of planted grasses on Plot R-1 was recorded on areas receiving straw mulch held by netting, with fertilizer applied at sowing as well as the first growing season. Lowest cover was noted on areas where straw mulch was crimped and fertilizer applied at the beginning of the first growing season (Table 6-1). Although identification of species continued to be hampered somewhat by the impacts of grazing, the dominant planted grasses continued to be the wheatgrass (Agropyron) species. Green needlegrass (Stipa viridula) and Indian ricegrass (Oryzopsis hymenoides), when present, contributed only about one percent cover. It appears that wheatgrass species have continued to flourish at the expense of other planted species.

A statistical comparison of 1985 cover data for planted and invader grasses between treatment combinations revealed no significant main effect, first order or second order interactions (Table 6-3). Although cover of planted grasses was higher in Block 1 than in the unfenced blocks, significant differences among blocks, which were expected due to variations in grazing pressure between fenced and unfenced portions of Plot R-1, were not evident for planted grass species. Such differences may become evident once the plots are grazed for several years or when aboveground biomass is measured in 1986.

Cover of planted forbs (13.9 percent) during 1985 accounted for 33.8 percent of the total mean cover for all treatment combinations (Table 6-1). Cover decreased from the 27.2 percent recorded in 1984 and the proportion of planted forbs to all vegetation cover also decreased

Table 6-3. Results of Three-way ANOVA's Comparing Arcsine Transformed Grass, Forb, and Shrub Cover Estimates for Planted and Invaded Species Among Treatment Combinations During 1985 on Experimental Revegetation Plot R-1, Tract C-a. [1/]

Growth Form	Source of Variation													
	Block		Mulch		Fertilizer		Block x Mulch		Block x Fertilizer		Mulch x Fertilizer		Block x Mulch x Fertilizer	
	F	PR>F[2/]	F	PR>F[2/]	F	PR>F[2/]	F	PR>F[2/]	F	PR>F[2/]	F	PR>F[2/]	F	PR>F[2/]
Grasses Planted	1.76	0.1989	1.43	0.2662	0.88	0.4690	0.36	0.8954	0.32	0.9210	0.42	0.9091	0.32	0.9905
Grasses Invaded	0.14	0.8741	0.97	0.4186	1.86	0.1557	0.52	0.7864	0.26	0.9519	1.59	0.1664	1.74	0.1345
Forbs Planted	1.07	0.3464	0.96	0.4180	0.91	0.4414	0.82	0.5540	1.10	0.3708	0.25	0.9844	1.14	0.3330
Forbs Invaded	1.04	0.3580	0.18	0.9077	0.49	0.6922	0.61	0.7254	0.89	0.5048	0.18	0.9954	0.72	0.7400
Shrubs Planted	0.16	0.8544	0.03	0.9897	0.23	0.8740	0.41	0.8678	0.83	0.5500	1.15	0.3342	0.50	0.9514
Shrubs Invaded [3/]														

* Significant at α = 0.05
** Significant at α = 0.025
1/ Duncan's Multiple Range Test results have not been included in the appendix because significant main effects were not evident.
2/ Represents the significance probability (α) associated with F.
3/ Missing values result from insufficient data to produce ANOVA results.

(Table 6-2). Invader forb species decreased in cover, from 1.5 percent in 1984 to 1.1 percent in 1985.

The distribution of forb cover among the various treatment combinations changed somewhat in 1985 relative to that reported in 1984. Highest cover of planted species, primarily cicer milkvetch (Astragalus cicer var Lutana), Lewis flax (Linum lewisii), and yellow sweetclover (Melilotus officinalis var Madrid), was recorded on plots which received no mulch and which received fertilizer at the time of sowing (Table 6-1). The highest cover of invader forbs was found in two different areas with varying mulch and fertilizer treatments. No single invader forb species approached the cover of planted species; however, Scarlet gilia (Ipomopsis aggregata), Douglas chaenactis (Chaenactis douglasii), and Machaeranthera species continued to be frequent minor contributors to cover (Appendix 6-1.1). Invader forb species for 1985 exhibited cover lower than that recorded since studies began in 1976 (Table 6-2).

Statistical comparisons for 1985 data showed no significant main effect, first order or second order interactions (Table 6-3). Because Block 1 remains fenced while most of the remainder of the study site is now open to grazing, these results seem to indicate that grazing has thus far not facilitated invasion from surrounding plant communities. In fact, the opposite effect seems to be the case for invader forb species. It remains to be seen what another year of grazing will have on the composition of species at this site. Data further illustrate that mulch and fertilizer treatments have ceased to influence cover.

Cover of planted shrub species decreased slightly from 6.7 percent in 1984 to 6.5 percent in 1985. However, as a proportion of total mean cover on Plot R-1, cover of planted shrub species during 1985 (15.8 percent) was higher than that evidenced in 1982, 1983, or 1984 (8.8, 8.6, and 10.6 percent respectively). Cover of invader shrub species changed little in 1985 relative to 1984 (Table 6-2). Broom snakeweed (Gutierrezia sarothrae) continued to be the only invader species encountered, whereas big sagebrush (Artemisia tridentata), winterfat (Ceratoides lanata), and rubber rabbitbrush (Chrysothamnus nauseosus)

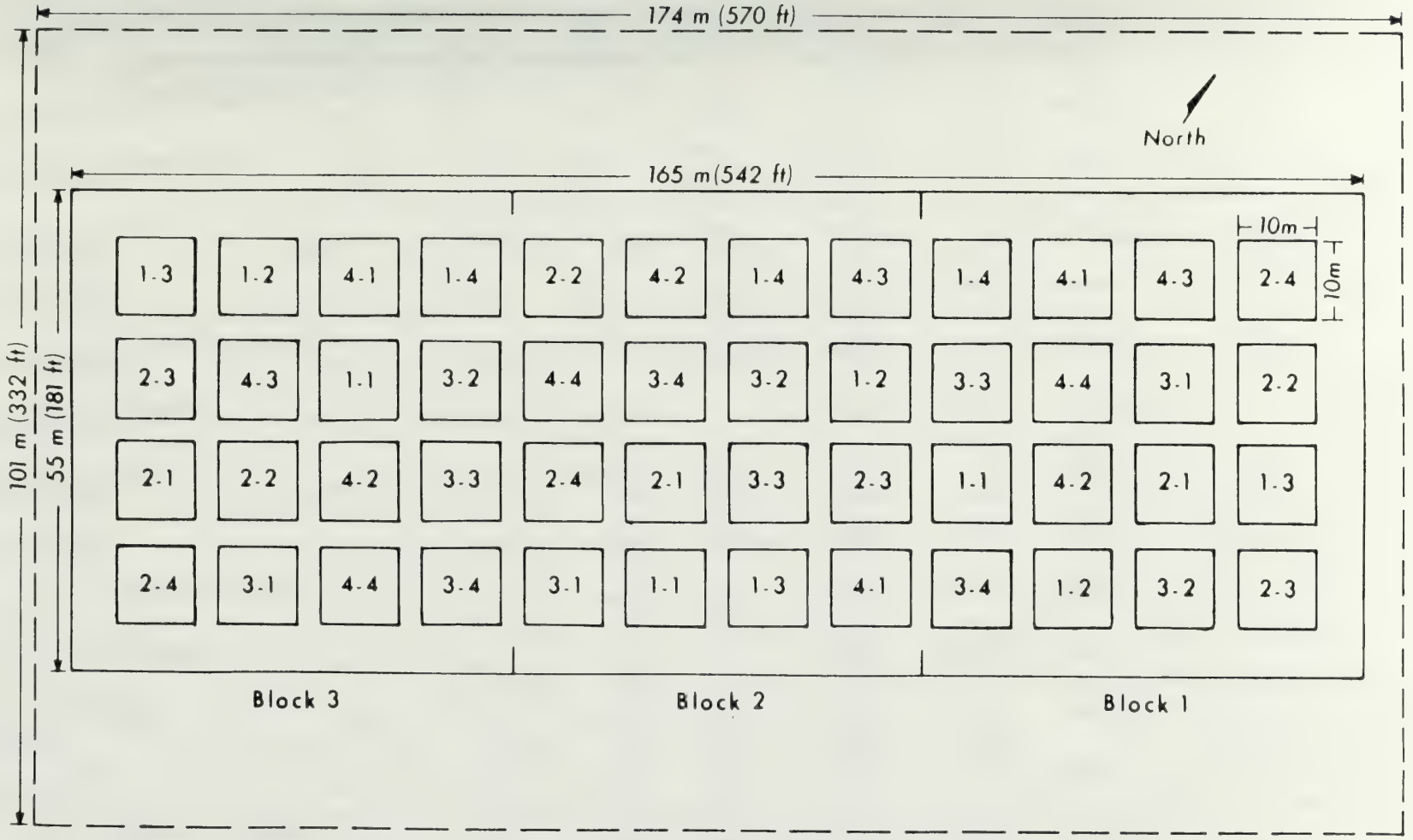
were relatively common planted species. The general distribution of shrub cover among treatment combinations was similar to that recorded in 1984.

No significant differences among treatments were noted for shrub cover during 1985 (Table 6-3).

b. Experimental Revegetation Plot R-2 - Cover estimates for species occurring on Plot R-2 were made September 4-5, 1985. The Plot R-2 configuration is illustrated on Figure 6-2. Data collected during 1985 are summarized on Table 6-4 and are presented in their entirety in Appendix 6-1.2.

Cover for all species over the 16 treatment combinations ranged from 34.6 to 60.8 percent, with a mean of 43.2 percent (Table 6-4). The trend in cover among treatment combinations was the same as that recorded in 1984. Highest cover was encountered on plots which received straw mulch held in place by netting and which were not fertilized. The lowest cover was noted where no mulch treatment was used and where fertilization occurred at the beginning of the first growing season. Mean cover over all treatment plots during 1985 (43.2 percent) decreased markedly from the 56.4 percent average cover noted during 1984 (Table 6-5). The decreased cover noted for R-2 during 1985 relative to 1984 was less than the corresponding decrease noted for R-1 (Table 6-2).

Cover of planted grasses averaged 14.1 percent during 1985 and accounted for 32.6 percent of total cover averaged over all treatment combinations. Invader grasses averaged 0.7 percent cover. Although increases in cover of planted species were substantial in 1983 and 1984 as compared to 1982, during 1985 total mean cover attributable to planted species returned to essentially the same cover as 1982. Invader grasses increased relative to 1984 but cover remained below levels noted in 1981-1983 (Table 6-5). Highest cover of planted grass species was noted on areas which received straw mulch held in place by netting but which received no fertilizer. The same treatment combination had the greatest cover in 1982, 1983 and 1984 as well.



Seeding Rate 18 kg/ha (16 lbs/acre)

Mulch Treatments:
(First Numeral in Treatment Designation)

1=No Mulch
2=Hydromulch
3=Straw Mulch Followed by Crimping
4=Straw Mulch With Netting

Fertilizer Treatments:
(180 kg/ha, 10-5-5)
(Second Numeral in Treatment Designation)

1=No Fertilizer
2=Fertilizer at Time of Sowing
3=Fertilizer at Beginning of First Full Growing Season
4=Fertilizer at Sowing & Beginning of First Full Growing Season

Figure 6-2. Treatment Configuration for Experimental Revegetation Plot R2, Tract C-a.

TABLE 6-4. MEAN COVER (%) OF PLANTED AND INVADED GRASSES, FORBS, AND SHRUBS FOR EXPERIMENTAL REVEGETATION PLOT R-2 SAMPLED DURING THE CURRENT REPORT YEAR, 1985.

TREATMENT COMBINATION	GRASSES		FORBS		SHRUBS		TOTAL
	PLANTED	INVADED	PLANTED	INVADED	PLANTED	INVADED	COVER
NO MULCH NO FERTILIZER	12.5	1.2	10.4	0.3	12.8	0.5	37.7
NO MULCH FERTILIZER-SOWING	14.3	0.2	14.7	0.6	10.7	.	40.3
NO MULCH FERTILIZER-1ST GROWING	10.2	0.8	8.3	0.9	14.4	.	34.6
NO MULCH FERTILIZER-SOWING/1ST GROWING	10.7	0.9	7.3	0.6	22.2	.	41.7
HYDROMULCH NO FERTILIZER	11.0	0.3	6.5	0.7	23.2	1.0	42.6
HYDROMULCH FERTILIZER-SOWING	10.3	0.7	13.8	0.7	22.8	.	48.2
HYDROMULCH FERTILIZER-1ST GROWING	12.2	0.2	8.8	1.0	16.5	0.4	39.0
HYDROMULCH FERTILIZER-SOWING/1ST GROWING	14.1	1.3	8.8	1.4	13.6	0.1	39.3
STRAW-CRIMPING NO FERTILIZER	11.4	0.3	17.1	0.8	14.3	0.7	44.4
STRAW-CRIMPING FERTILIZER-SOWING	15.3	0.8	13.8	0.3	16.6	.	46.9
STRAW-CRIMPING FERTILIZER-1ST GROWING	13.9	0.2	11.0	.	17.3	0.6	42.9
STRAW-CRIMPING FERTILIZER-SOWING/1ST GROWING	13.5	0.2	12.7	0.8	14.3	.	41.3
STRAW-NETTING NO FERTILIZER	24.4	0.8	15.6	0.2	19.4	0.4	60.8
STRAW-NETTING FERTILIZER-SOWING	16.2	1.1	7.4	0.3	14.8	.	39.7
STRAW-NETTING FERTILIZER-1ST GROWING	16.5	1.6	5.8	0.4	15.1	0.5	39.8
STRAW-NETTING FERTILIZER-SOWING/1ST GROWING	18.4	0.5	13.2	0.4	18.5	0.2	51.2
MEAN COVER	14.1	0.7	10.9	0.6	16.6	0.3	43.2

Table 6-5. Comparison of Mean Cover (%) Among Years for All Treatment Combinations on Experimental Revegetation Plot R-2, Tract C-a

Growth Form	Year								
	1976	1977	1978	1980	1981	1982[1/]	1983[1/]	1984[1/]	1985[1/]
Grasses Planted	4.6	9.0	8.1	15.1	11.5	14.0	21.8	19.4	14.1
Grasses Invaded	2.6	0.1	0.4	0.8	1.3	1.6	2.7	0.4	0.7
Forbs Planted	2.8	3.3	2.5	8.3	7.3	9.8	15.1	14.5	10.9
Forbs Invaded	5.6	21.1	12.9	6.8	3.6	1.9	2.2	2.2	0.6
Shrubs Planted	1.4	2.6	4.7	6.2	5.6	10.5	18.9	18.7	16.6
Shrubs Invaded	0.0	0.0	0.0	0.1	0.4	0.8	1.2	1.2	0.3
TOTAL	17.0	36.1	28.5	37.3	29.7	38.6	62.0	56.4	43.2

1/ Data are based on cover estimates from sample quadrats established in 1982

Lowest cover of planted species was encountered on areas which received no mulch but were fertilized in the first growing season. Wheatgrass species and Indian ricegrass were the most frequently encountered planted grasses. The highest cover of invader species, primarily crested wheatgrass (Agropyron cristatum) and squirreltail (Sitanion hystrix), occurred among treatments with straw mulch held by netting and fertilizer application during the first growing season (Table 6-4). As noted in previous reports, the differences among treatments noted this long after application of the mulch and/or fertilizer are likely not directly related to the amendments, but rather are artifacts of the study design and/or related to competition among species which began within several years after planting.

Statistical comparison of 1985 cover data for planted or invader grasses between treatment combinations revealed no significant main or interaction effects (Table 6-6). Therefore, neither the mulch nor fertilizer treatments seemed to be influencing cover 10 years after planting. No significant effects on cover were evident during the second year that the majority of Blocks 1 and 2 were opened to grazing. However, identification of grass species was hampered by grazing.

Cover of planted forb species on Plot R-2 averaged 10.9 percent during 1985, which accounted for 25.2 percent of the average cover over all treatments (Table 6-4). This represents a decrease in cover relative to 1984 (Table 6-5), but the proportion which planted forbs contributed relative to all species remained essentially the same. Invader forb species cover (0.6 percent) was the lowest in 10 years of study. The highest cover of planted species (17.1 percent) was encountered on areas which were not fertilized but which received straw mulch held by crimping. The highest cover of invader species was recorded on areas which received hydromulch and which were fertilized at sowing as well as the beginning of the first growing season. Cicer milkvetch and Lewis flax continue to be the most prevalent planted forb species encountered. Yellow sweetclover contributed low cover relative to the flax and milkvetch (Appendix 6-1.2). There was little change, if any, in the composition of invader species, Douglas chaenactis, cryptantha

Table 6-6. Results of Three-way ANOVA's Comparing Arcsine Transformed Grass, Forb, and Shrub Cover Estimates for Planted and Invaded Species Among Treatment Combinations During 1985 on Experimental Revegetation Plot R-2, Tract C-a. [1/]

Growth Form	Source of Variation: Block F	Block PR>F [2/]	Mulch F	Mulch PR>F [2/]	Fertilizer F	Fertilizer PR>F [2/]	Block x Mulch F	Block x Mulch PR>F [2/]	Block x Fertilizer F	Block x Fertilizer PR>F [2/]	Mulch x Fertilizer F	Mulch x Fertilizer PR>F [2/]	Block x Mulch x Fertilizer F	Block x Mulch x Fertilizer PR>F [2/]
Grasses Planted	0.66	0.5178	2.58	0.0580	0.26	0.8549	0.38	0.8916	0.16	0.9864	0.21	0.9921	0.34	0.9944
Grasses Invaded	0.58	0.5780	0.83	0.5065	0.23	0.8742	1.52	0.2666	0.34	0.8975	2.18	0.1318	1.76	0.2139
Forbs Planted	0.19	0.8245	1.70	0.1759	0.60	0.6219	0.29	0.9387	0.14	0.9902	0.29	0.9728	0.81	0.6844
Forbs Invaded	1.14	0.3329	1.19	0.3298	0.39	0.7616	0.80	0.5770	0.35	0.8798	0.56	0.7989	0.79	0.6312
Shrubs Planted	1.30	0.2784	0.24	0.8664	0.16	0.9209	0.86	0.5280	0.15	0.9893	0.61	0.7817	0.43	0.9758
Shrubs Invaded [3/]														

* Significant at $\alpha = 0.05$
** Significant at $\alpha = 0.025$
1/ Duncan's Multiple Range Test results have not been included in the appendix because significant main effects were not evident.
2/ Represents the significance probability (α) associated with F.
3/ Missing values occur when there is insufficient data to produce ANOVA results.

(Cryptantha sericia), Machaeranthera and lobeleaf groundsel (Senecio multilobatus) being the most common species.

Results of the three-way ANOVA comparing 1985 forb cover among treatment combinations show no significant main or interaction effects (Table 6-6). However, comparison of forb cover among years (Table 6-5) indicates that, aside from 1983 and 1984, cover of planted forb species during 1985 was higher than for the 1976-1982 sample periods. Cover of invader species, on the other hand, was lower than all other sample periods. High cover of planted species during 1983 and 1984 was likely related to increased moisture during the growing season. Lower precipitation during the 1985 growing season (7.56 inches vs. 13.9 inches in 1984) probably contributed to greatly reduced cover of both forbs and grasses.

Shrub cover for planted species averaged 16.6 percent over all treatment combinations during the 1985 sample period, with the range being from 10.7 to 23.2 percent (Table 6-4). Cover of planted shrub species accounted for 38.4 percent of total mean cover for all species. Cover of invader species averaged only 0.3 percent during 1985, with a range of zero to 0.7 percent. Cover of planted and invader shrub species decreased relative to that recorded for 1983 and 1984.

Areas which received hydromulch and no fertilizer had the highest cover of planted shrubs. The lowest cover was encountered on areas which were treated with seven different mulch and/or fertilizer treatments (Table 6-4). Rubber rabbitbrush was the greatest contributor to cover of planted shrub species, with winterfat, fourwing saltbrush (Atriplex canescens) and antelope bitterbrush (Purshia tridentata) being somewhat less common and contributing lower cover. Broom snakeweed was the only invader shrub species encountered on Plot R-2. A statistical comparison of cover of planted shrubs among the various treatment combinations for 1985 indicated no significant main or interaction effects (Table 6-6).

c. Precipitation - Wedge gauge readings for precipitation during the May-October period were 9.30 inches at Meteorological Monitoring

Site 1 as compared to 7.22 inches at Plot R-1 and 7.56 inches at Plot R-2 during the corresponding period. Plot R-3 received 7.46 inches of precipitation for May-October (see Table 6-11).

Relatively uniform precipitation during the growing season seems to have contributed to the high vegetative cover noted during 1983 and 1984 as compared to earlier years. Typically there has been a pronounced lack of precipitation on Tract C-a from mid-June through July. During June and July of 1985, 2.0 inches of precipitation were recorded at Plot R-1 and 2.16 inches at Plot R-2. Although this was lower than that recorded for 1984 (4.7 inches), this represented considerably higher precipitation than was recorded during the first eight years of study at these locations. It is likely that the lower summer precipitation for 1985 as compared to 1983-84 has contributed to reduced vegetative cover on the site, as noted above.

B. Experimental Revegetation on a Simulated Processed Shale Disposal Site

1. Objectives

During RBOSC's demonstration of surface retorting technology and subsequent commercial operations, processed shale will be produced as a by-product of surface retorting. This material will require surface disposal because not all of the processed shale can be returned to an open pit mine. RBOSC initiated revegetation experiments in 1976 to determine a feasible method of reestablishing a productive, self-sustaining livestock and/or wildlife habitat on processed shale disposal sites.

2. Methods

Revegetation Plot R-3 was established in the fall of 1976, and is located near the southeastern corner of Tract C-a. The plot is situated in an area with a southeast-facing aspect and a slope of approximately 20 percent.

The plot is designed to simulate an artificial soil profile for use in overburden/processed shale disposal piles. This profile, from bottom to top, consists of 0.45 m of compacted Tosco II processed shale, 0.9 m of segregated sized overburden-like material, 0.3 m of subsoil, and 0.15 m of topsoil. The overburden-like material (0.9 m) is expected to inhibit the capillary migration of soluble, potentially toxic components from the processed shale into the surface plant growth medium. The treatment configuration at Plot R-3 is designed to test the effectiveness of this reconstructed soil profile, as well as various seeding rates and mulch regimes (Figure 6-3). Portions of Plot R-3 underlain by processed shale are considered treatments while those without processed shale serve as controls.

During 1985 cover was assessed within three 1 m^2 quadrats within each of the 36 treatment plots. These sample quadrats were the same as those randomly selected and sampled during 1982, 1983, and 1984.

Soil moisture samples (percent volume) were collected in situ during 1985 from three depths (approximately 25 cm, 75 cm and 150 cm) within permanently established holes centered above each of 36 plots on R-3. Soil moisture samples were obtained monthly from May-October using a Troxler neutron probe depth moisture gauge. Gauge readings were to be corrected for the non-water hydrogen component of the reading using correction factors determined at the time access tubes were established in 1982. Continued use of these correction factors is based on the assumption that hydrogen associated with such things as organics remains relatively constant. Sampling of soil moisture will continue through 1986.

Additional information on experimental revegetation Plot R-3 is available in MDP Monitoring Report 5 (RBOSC 1980) and in Revegetation Annual Reports (RBOSC 1977, 1978, 1979a).

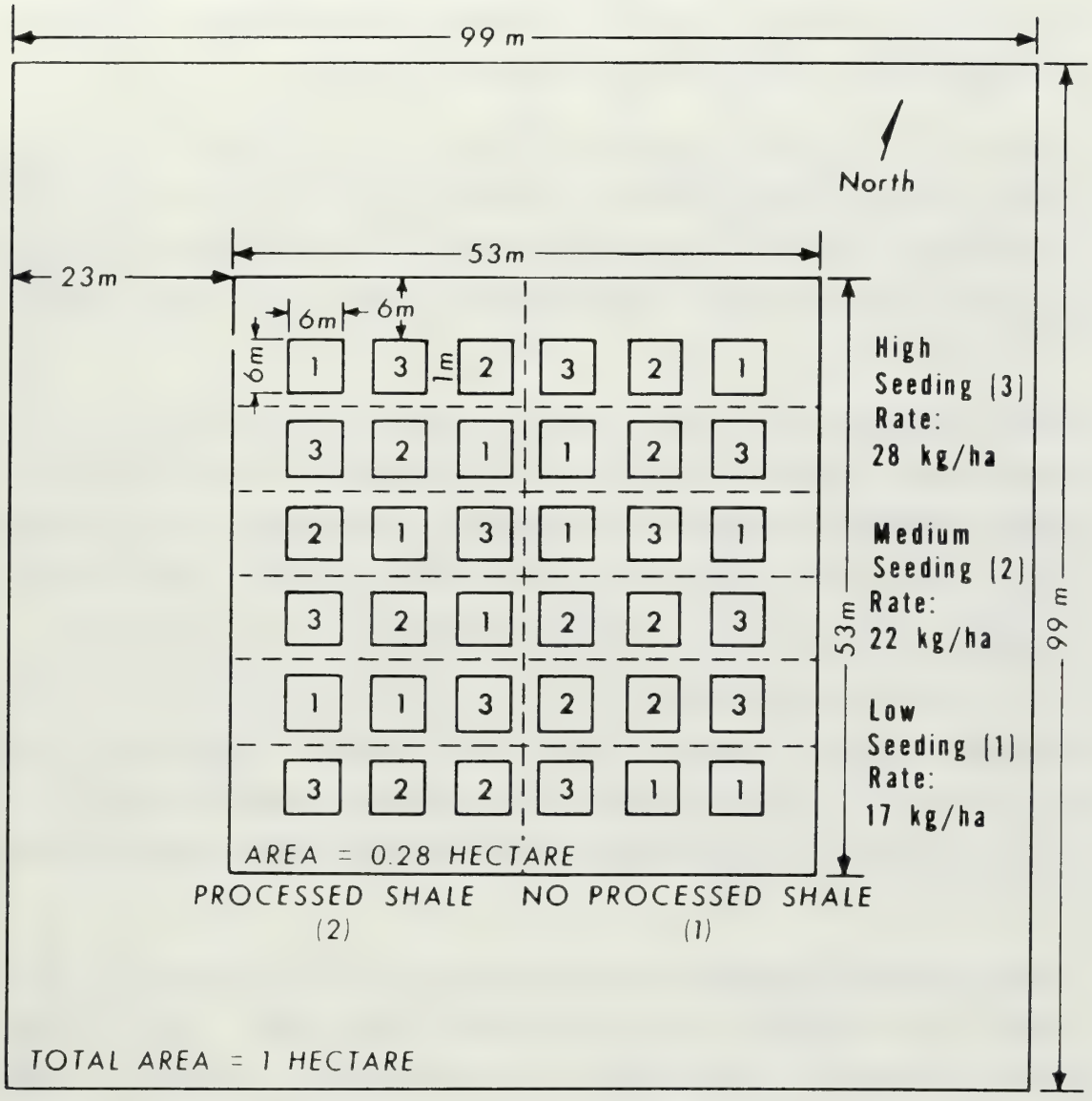


Figure 6-3. Configuration of Experimental Revegetation Plot over 'Tosco II' Processed Shale.

3. Results and Discussion

a. Cover Data - Cover for grasses, forbs, and shrubs on Plot R-3 was estimated August 20, 1985. These data are summarized on Table 6-7 and presented in their entirety in Appendix 6-1.3.

Cover for all species averaged 62.5 percent on the control (no processed shale) portion of R-3, with the range being from 51.7 to 69.5 percent. Average cover on the treatment (underlain by processed shale) portion of R-3 was 68.4 percent, with the range being from 57.2 to 79.8 percent (Table 6-7).

Highest and lowest total cover determinations for the treatment (processed shale) portion of the site were encountered on the hydromulch-medium seeding and hydromulch-low seeding, respectively. The distribution of total cover on the control (no shale) portion of the site was similar to that noted for the shale treatment portion of the plot; however, the hydromulch-high seeding treatment had the highest cover. Cover of all species averaged over all treatment combinations has decreased from 74.1 percent in 1984 to 65.5 percent in 1985 (Table 6-8). As discussed for Plots R-1 and R-2, this decrease seems to be due in part to decreased precipitation during the 1985 growing season relative to the previous two years.

Planted grasses averaged 26.7 percent cover for all treatment combinations, or 40.8 percent of total mean cover (Table 6-8). Invader grass species averaged 2.7 percent cover, accounting for 4.1 percent of total mean cover. Cover of planted and invader species decreased in 1985 relative to 1984 and the proportion of total cover attributable to grasses also decreased slightly. Invader species continued to be primarily cheatgrasses and/or crested wheatgrass (Appendix 6-1.3). Among the planted grasses, wheatgrass species continued to dominate, with Indian ricegrass and smooth brome (Bromus inermis) being encountered frequently but contributing much lower cover than the wheatgrasses. If wheatgrasses continue to flourish, it is unlikely that other planted or invader species will increase in cover.

TABLE 6-7. COVERAGE (%) OF PLANTED AND INVADED GRASSES, FORBS, AND SHRUBS FOR EXPERIMENTAL REVEGETATION PLOT R-3 (SUBPLOTS 4, 5, AND 6) DURING THE CURRENT REPORTING YEAR, 1985

TREATMENTS COMBINATIONS	CONTROL (NO PROCESSED SHALE)							TREATMENT (PROCESSED SHALE)						
	GRASSES		FORBS		SHRUBS		TOTAL	GRASSES		FORBS		SHRUBS		TOTAL
	PLANTED	INVADED	PLANTED	INVADED	PLANTED	INVADED	COVER	PLANTED	INVADED	PLANTED	INVADED	PLANTED	INVADED	COVER
HAY MULCH LOW SEEDING	20.3	8.0	17.3	0.7	23.2	.	69.5	30.3	5.0	10.7	.	22.7	.	68.7
HYDROMULCH LOW SEEDING	25.0	3.2	19.2	0.5	3.8	.	51.7	16.2	0.5	6.3	0.3	32.0	1.8	57.2
NO MULCH LOW SEEDING	22.8	0.5	23.8	.	19.0	0.5	66.7	37.5	.	19.5	0.2	3.0	0.5	60.7
HAY MULCH MEDIUM SEEDING	24.7	14.5	19.7	0.2	6.0	.	65.0	23.7	6.2	21.7	0.2	18.5	.	70.2
HYDROMULCH MEDIUM SEEDING	25.7	3.3	19.5	.	15.0	0.3	63.8	25.5	0.7	18.3	0.8	34.0	0.5	79.8
NO MULCH MEDIUM SEEDING	29.7	2.2	12.5	1.8	5.3	1.3	52.8	25.7	0.7	11.5	.	18.3	3.7	59.8
HAY MULCH HIGH SEEDING	28.0	0.8	21.3	.	14.3	.	64.5	28.5	2.2	10.2	0.7	23.8	4.0	69.3
HYDROMULCH HIGH SEEDING	27.0	.	30.5	0.2	11.5	0.2	69.3	34.0	0.2	18.2	0.7	23.5	2.3	78.8
NO MULCH HIGH SEEDING	31.2	.	26.5	.	1.3	.	59.0	25.3	0.8	11.0	0.3	32.8	1.0	71.3
MEAN COVER	26.0	3.6	21.1	0.4	11.1	0.3	62.5	27.4	1.8	14.1	0.4	23.2	1.5	68.4

Table 6-8. Comparison of Mean Cover (%) Among Years for All Treatment Combinations on Experimental Revegetation Plot R-3, Tract C-a.

Growth Form	Year								
	1977	1978	1979	1980	1981	1982[1/]	1983[1/]	1984[1/]	1985[1/]
Grasses Planted	5.6	14.0	28.8	24.7	22.7	17.4	26.0	32.8	26.7
Grasses Invaded	0.8	0.5	1.5	3.4	3.0	4.1	10.4	4.2	2.7
Forbs Planted	8.0	5.1	3.5	4.0	7.3	6.6	10.6	14.6	17.6
Forbs Invaded	1.2	0.6	0.9	0.4	0.3	0.8	0.4	1.1	0.4
Shrubs Planted	4.7	7.2	16.7	4.0	4.4	13.6	16.1	20.2	17.2
Shrubs Invaded	0.0	0.1	0.2	0.1	0.2	1.0	0.8	1.2	0.9
TOTAL	20.3	27.5	51.6	36.6	37.9	43.5	64.3	74.1	65.5

1/ Data are based on cover estimates from sample quadrats established in 1982.

A statistical comparison of 1985 cover data for all planted and invader grasses showed that there was only one significant difference based on the treatment combinations tested (Table 6-9). Invader grass species showed significant differences in cover based on mulch treatments. Duncan's Multiple Range Test results did not confirm such differences. Similar inconsistent results were found in 1984. The reason for these discrepancies is not clear, but for both 1984 and 1985, only one case was significant at the 5 percent level (invader grass species), and it just barely passed the significance test. With a different calculation technique, it is possible that the same treatment just failed the test of significance in the Duncan's Multiple Range Test. Consequently, an apparent inconsistency may just be a result of different calculation techniques.

When cover based on individual planted grass species was compared among treatments, no significant main effect differences were noted (Table 6-10). Several significant interaction effect differences were recorded for Pubescent wheatgrass. However, these differences were not evident in main effects, perhaps because the effect of substrate and mulch were counteracting one another. Whatever the cause might be, it is not likely to be directly related to mulch treatments but rather to competition from other plant species which may have been influenced by mulch and/or seeding regimes at some point in the past.

Cover of planted forb species averaged 17.6 percent over all treatment combinations (Table 6-8), which accounts for approximately 26.9 percent of total mean cover. This represents the highest cover of planted forb species encountered since studies began in 1977. Differences between control and treatment portions of R-3 were slight, with cover averaging 21.1 percent for the control and 14.1 percent on the treatment site (Table 6-7). Cover of invader forb species (0.4 percent) was the same for both control and treatment sides of the plot. Cicer milkvetch was the primary contributor of cover for planted species (Appendix 6-1.3). Although yellow sweetcover and Lewis flax were encountered occasionally, their cover over the last three years has decreased relative to previous

Table 6-9. Results of Three-way ANOVA's Comparing Arcsine Transformed Cover Estimates for Planted and Invaded Grass, Forb, and Shrub Species During 1985 on Experimental Revegetation Plot R-3, Tract C-a. [1/]

Growth Form	Source of Variation: Substrate F	Substrate PR>F [2/]	Mulch F	Mulch PR>F [2/]	Seeding F	Seeding PR>F [2/]	Substrate x Mulch F	Substrate x Mulch PR>F [2/]	Substrate x Seeding F	Substrate x Seeding PR>F [2/]	Mulch x Seeding F	Mulch x Seeding PR>F [2/]	Substrate x Mulch x Seeding F	Substrate x Mulch x Seeding PR>F [2/]
Grasses Planted	0.29	0.5941	0.28	0.7530	0.00	0.9975	0.08	0.9272	0.08	0.9268	0.06	0.9926	0.19	0.9414
Grasses Invaded	2.62	0.1212	3.78*	0.0406	1.00	0.3864	2.09	0.1496	1.22	0.3169	0.05	0.9946	0.55	0.4663
Forbs Planted	1.78	0.1935	0.29	0.7475	1.34	0.2799	0.21	0.8081	2.78	0.0808	0.72	0.5833	0.58	0.6774
Forbs Invaded [3/]	0.21	0.6540	0.35	0.7158	2.29	0.1515	0.92	0.4310	0.56	0.5887	1.51	0.2675		
Shrubs Planted	11.05**	0.0013	0.17	0.8420	0.52	0.5946	0.88	0.4172	0.27	0.7613	0.38	0.8218	1.66	0.1648
Shrubs Invaded [3/]	3.01	0.1165	2.03	0.1877	0.67	0.5364	0.04	0.8393	0.19	0.8329	0.83	0.4680		

* Significant at $\alpha = 0.05$
** Significant at $\alpha = 0.025$
1/ Duncan's Multiple Range Test results for significant main effects are presented in Appendix 6-1.4.
2/ Represents the significance probability (α) associated with F.
3/ Missing values occur when there is insufficient data to produce ANOVA results.

Table 6-10. Results of Three-way ANOVA's Comparing Arcsine Transformed Cover Estimates for Planted Species Encountered During 1985 on Experimental Revegetation Plot R-3, Tract C-a. [1/]

Growth Form	Source of Variation: Substrate F	Substrate PR>F [2/]	Mulch F	Mulch PR>F [2/]	Seeding F	Seeding PR>F [2/]	Substrate x Mulch F	Substrate x Mulch PR>F [2/]	Substrate x Seeding F	Substrate x Seeding PR>F [2/]	Mulch x Seeding F	Mulch x Seeding PR>F [2/]	Substrate x Mulch x Seeding F	Substrate x Mulch x Seeding PR>F [2/]
Grasses Planted														
Agropyron species	0.18	0.6783	1.31	0.2945	0.24	0.7905	0.01	0.9945	0.51	0.6087	0.65	0.6369	1.22	0.3363
Agropyron trichophorum	0.00	0.9995	0.88	0.4823	5.98	0.0629	3.52	0.1314	7.64*	0.0430	7.48*	0.0445	3.71	0.1263
Bromus ineris [3/]	2.48	0.2559	0.27	0.7877	0.05	0.9485			0.00	0.9550	0.45	0.6917		
Orysopsis hymenoides	0.51	0.4961	0.18	0.8372	1.94	0.2061	0.15	0.8591	1.13	0.3682	0.14	0.9321	0.19	0.8272
Stipa viridula	0.13	0.7445	0.03	0.9709	0.29	0.7665	2.01	0.2792	1.25	0.4029	0.13	0.9376	0.16	0.7124
Forbs Planted														
Astragalus cicer	3.92	0.0631	0.11	0.8979	0.38	0.6882	0.07	0.9334	1.28	0.3009	1.14	0.3679	0.09	0.9850
Linum lewisii [3/]														
Melilotus officinalis [3/]														
Shrubs Planted														
Atriplex canescens	6.30*	0.0290	0.08	0.9202	1.68	0.2304	3.22	0.0792	1.68	0.2308	8.57**	0.0032	1.93	0.1919
Chrysothamnus nauseosus	7.79**	0.0236	3.45	0.0832	1.44	0.2919	4.83	0.0422	0.21	0.8128	2.04	0.1819	10.33	0.0123
Certatoides lanata	6.14*	0.0290	2.67	0.1098	0.90	0.4332	0.66	0.5325	4.78*	0.0297	0.38	0.8204	1.70	0.2147
Purshia tridentata [3/]	0.33	0.5840	0.09	0.9140	0.40	0.6864	0.42	0.6744	0.82	0.4803	0.32	0.8586		

* Significant at $\alpha = 0.05$
** Significant at $\alpha = 0.025$
1/ Duncan's Multiple Range Test results for significant main effects are presented in Appendix 6-1.4.
2/ Represents the significance probability (α) associated with F.
3/ Missing values result from insufficient data to produce ANOVA results.

years. A number of different invader forbs were encountered but no single species stood out as being dominant (Appendix 6-1.3).

Comparison of forb cover for 1985 showed no significant differences among the treatment combinations. When cover of individual planted forb species was tested no differences were evident (Table 6-10). However, the fact that enough data to complete the ANOVA was present only for Cicer milkvetch illustrates the reduced importance of other species, as noted above. Nevertheless, cover of planted forbs did increase in 1985 as a result of continued growth of Cicer milkvetch. These data illustrate the success of Cicer milkvetch for revegetation purposes but also show that richness of planted forb species may be of concern in the long term. If competition from planted grasses, forbs and shrubs continues to be high, cover contributed by invader forbs cannot be expected to fill this void in forb cover. One possible solution to this potential problem would be to use additional forb species which are able to compete with grasses and/or to reduce the seeding rate for grasses.

Cover of planted shrub species averaged 17.2 percent on Plot R-3 during 1985, which accounted for 25.9 percent of the total mean cover (Table 6-8). Cover on the treatment portion of the plot was somewhat higher than on the control, 23.2 and 11.1 percent, respectively. There was considerable variability in cover among the various treatment combinations with the hydromulch-medium seeding combination underlain by processed shale exhibiting the highest overall cover (34.0 percent) (Table 6-7). Cover of invader shrub species averaged 0.9 percent over all treatments. The highest cover of invader species was found on the hay mulch-high seeding treatment combination within the treatment area (Table 6-7). Fourwing saltbush and winterfat continue to be the dominant seeded shrub species, with big sagebrush being an important invader and/or species planted as seedlings. Cover of planted shrub species increased in spite of the demise of fourwing saltbush which seemed to have experienced die-off among the older individuals over the past several years. However, because this species produces seed in 3-5 years, it is expected that fourwing saltbush will continue its strong presence on the site.

A statistical comparison of 1985 cover for planted shrub species grouped by growth form indicated a significant difference based on substrate, with higher cover being noted on the portion underlain with processed shale (Table 6-9, Appendix 6-1.4). When cover of individual planted species was compared among treatments, several significant main effect and first order interactions were noted (Table 6-10, Appendix 6-1.4). Although there was a significant mulch x seeding interaction noted for fourwing saltbush, the only main effect difference noted was for substrate, with higher cover noted on the treatment portion of the plot. The significant substrate x seeding interaction for winterfat also resulted in a significant main effect difference based on substrate, with cover being higher on the treatment portion of the plot (underlain with processed shale). In the case of rabbitbrush, there was a significant second order interaction effect that was evidenced in a significant substrate main effect. As with fourwing saltbush and winterfat, cover was greater on the treatment portion. In all likelihood these differences were not a result of cause-and-effect relationships associated with substrate but rather were related to interspecific competition or, more likely, to variations in seeding at the time of planting. Trace element analyses from previous years as well as soil conductivity tests have indicated no upward migration of soluble components from TOSCO II shale.

b. Precipitation Data - Rainfall at Plot R-3 totalled 7.46 inches for the May-October 1985 period (Table 6-11). This is about half that recorded for the same period in 1984. In spite of this reduction, there was more precipitation in the June-August interval than was typical during the 1977-1981 period. Reduced precipitation in 1985 as compared to 1984 probably contributed to lower vegetative cover in 1985. But, because the mid-summer precipitation was somewhat higher than that recorded during the first five growing seasons at Plot R-3, a more drastic decline in cover was not noted.

c. Leachate Collection - During the spring of 1985, leachate was collected from both above and below the processed shale within the reconstructed soil profile for the first time since the study plot was

Table 6-11. Rainfall (inches) Recorded at Experimental Revegetation Plots R-1, R-2 and R-3 during 1985, Tract C-a

Month	Plot R-1		Plot R-2		Plot R-3		Mean
	Upper	Lower	Upper	Lower	Upper	Lower	
May	1.77	1.80	1.86	1.72	1.79	ND	1.79
June	0.58	0.52	0.58	0.62	0.59	0.56	0.58
July	1.42	ND	1.54	1.59	1.49	1.43	1.49
August	0.34	0.37	0.44	0.44	0.55	0.52	0.44
September and October	ND	3.11	3.17	2.86[2/]	3.16	3.03	3.07
Gauge Total	7.22[1/]	7.22[1/]	7.59	7.54	7.58	7.33[1/]	
Plot Mean	7.22		7.56		7.46		

1/ In instances where data are missing, gauge totals are determined by using precipitation values from the other gauge at the plot.

2/ Top of gauge was disturbed; consequently, the value may be somewhat in error.

installed in 1976. High precipitation during the 1983-1984 period undoubtedly contributed to the movement of moisture through the reconstructed soil profile and 18 inches of processed shale in sufficient quantities to produce flow in the collection system. It is unclear why no leachate was collected from the control side of the plot at similar depths within the reconstructed soil profile.

Data from analyses of the leachate are reported in Appendix 6-1.4. The pH values of the two leachate samples were similar; however, conductivity, most major cations and anions, DOC, TDS, total alkalinity, and ammonia nitrogen were higher in the leachate which passed through the Tosco II processed shale. Values for arsenic, lithium, molybdenum and selenium were identical for the two samples.

For purposes of comparison with processed shale and R-3 soil chemistry, data from analyses conducted in 1982 have also been included in Appendix 6-1.4. Trace elements in the leachate were typically at or below the levels extracted from the reconstructed soil profile above the Tosco II shale. The main differences between the leachate and soil chemistry resulted from sodium, bicarbonate, and sulfate ions which are present in the processed shale in much greater quantities than in the overlying reconstructed soil profile.

d. Soil Moisture - Neutron probe soil moisture readings at three depths (approximately 25, 75 and 150 cm) within the reconstructed soil profile and/or processed shale at Plot R-3 were recorded monthly from May through September 1985. These data are summarized on Table 6-12 and are presented in their entirety in Appendix 6-1.3.

Corrected gauge readings (% of unit volume occupied by water) range from a high of 26.9 at the 25 cm depth in May to a low of 4.4 at a similar depth in September. However, the aforementioned moisture determinations are at different slope positions on R-3, as is evident on Table 6-12. Moisture within the reconstructed soil profile decreased at all three sample depths from May through September. However, moisture in surface soils was depleted to a greater extent than that at intermediate and

TABLE 6-12. MEAN MONTHLY MOISTURE DETERMINATIONS (NEUTRON PROBE-CORRECTED READINGS, PERCENT VOLUME) FOR THREE SLOPE POSITIONS AND THREE DEPTHS WITHIN THE RECONSTRUCTED SOIL PROFILE ON EXPERIMENTAL REVEGETATION PLOT R-3, 1985

SAMPLE MONTH	NO PROCESSED SHALE									PROCESSED SHALE								
	LOWER SLOPE			MIDDLE SLOPE			HIGH SLOPE			LOWER SLOPE			MIDDLE SLOPE			HIGH SLOPE		
	25 CM	75 CM	150 CM	25 CM	75 CM	150 CM	25 CM	75 CM	150 CM	25 CM	75 CM	150 CM	25 CM	75 CM	150 CM	25 CM	75 CM	150 CM
MAY	25.3	23.9	22.4	24.8	24.7	24.2	26.9	23.9	23.6	24.7	22.7	22.4	25.2	23.4	24.3	25.8	26.1	26.4
JUNE	21.1	22.4	21.8	20.5	22.6	24.1	22.2	22.1	22.2	18.7	19.7	21.3	18.4	19.7	22.9	21.4	23.5	25.8
JULY	9.5	17.8	18.2	10.5	16.0	20.1	11.3	15.1	18.0	8.6	13.9	19.1	8.6	12.1	18.0	10.1	16.0	20.5
AUGUST	7.1	15.0	16.2	7.0	13.0	18.0	8.5	11.9	15.9	6.9	11.7	17.9	6.3	9.8	14.9	7.6	13.0	18.3
SEPTEMBER	5.2	11.1	12.3	5.1	9.0	16.3	5.7	8.3	13.3	5.3	8.3	15.0	4.4	7.3	10.4	5.0	8.0	12.0
SUMMARY STATISTICS																		
MEAN:	13.6	18.1	18.2	13.6	17.1	20.5	14.9	16.2	18.6	12.8	15.3	19.2	12.6	14.5	18.1	14.0	17.3	20.6
STANDARD DEVIATION:	1.35	1.42	1.91	1.22	1.78	3.16	1.34	1.93	3.93	1.56	1.00	2.83	1.54	1.41	3.35	1.16	1.31	3.06

deep portions of the profile. Moisture at 25 cm depths ranged from 4.4 to 5.7 percent in September 1985 as compared to from 6.5 to 7.8 percent in September 1983. Variations among years probably result from differences in precipitation. Similar trends were seen at 75 cm and 150 cm depths; however, moisture values were not as low at these depths as those recorded in 1983.

It is interesting to note that, after two years of high precipitation during 1983 and 1984, moisture at the 150 cm depth at the beginning of the growing season was nearly as high as the levels near the surface. High moisture values at the 150 cm depth during May 1985 corresponded with leachate production from the treatment portion of the plot, which is underlain with processed shale. It is unclear why no leachate was produced from the control portion of the plot where moisture levels were essentially the same as those at depth on the treatment side.

Statistical comparisons of moisture data revealed significant differences in moisture between substrates for June, July and September, between slope positions for May and June, and among sample depths within the reconstructed soil profile for all months sampled in 1985 (Table 6-13). Duncan's Multiple Range Test results illustrate that moisture levels were significantly higher in the soils on the no shale control than on the processed shale treatment portion of the plot (Appendix 6-1.4) during June, July and September. It is unclear why one side had higher moisture than the other and why this phenomenon did not extend to the months of May and August.

Significant differences in moisture among slope positions on Plot R-3 are also illustrated by Duncan's Multiple Range Test results (Appendix 6-1.4). Soil moisture levels at the top of the slope (high seeding treatment on Figure 6-3) were significantly higher than mid-and lower slope positions during the months of May and June. It is possible that there is greater snow accumulation just over the top of Wolf Ridge than at sites further removed from the ridge top. If this is the case, snow melt in the spring would contribute more moisture to the upper portion of the slope at Plot R-3 than to the lower two thirds of the plot.

Table 6-13. Results of Analysis of Variance Comparing 1985 Neutron Probe Moisture Determinations Among Substrates, Slope Positions and Sample Depths with the Reconstructed Soil Profile on Plot R-3, Tract C-a.

Sample	Source of Variation					
	Substrate		Slope Position		Depth	
Month	F	PR>F[2/]	F	PR>F[2/]	F	PR>F[2/]
May	0.15	0.6967	7.25**	0.0011	5.91**	0.0037
June	4.17*	0.0437	8.54**	0.0004	13.18**	0.0001
July	5.03*	0.0271	1.32	0.2723	127.17**	0.0001
August	2.23	0.1387	2.06	0.1326	142.58**	0.0001
September	5.52**	0.0207	1.15	0.3199	88.45**	0.0001

* Significant at $\alpha = 0.05$

** Significant at $\alpha = 0.025$

1/ Duncan's Multiple Range Test Results for significant main effect differences are presented in Appendix 6-1.4.

2/ Represents the significance probability (α) associated with F.

Data for surface soils (25 cm) during the month of May seem to support this supposition. Duncan's Multiple Range Test results for significant differences based on depths within the reconstructed soil profile indicate that moisture is significantly higher in surface soils than at the two deeper sample locations during the month of May (Appendix 6-1.4). After May, however, test results show that there was significantly more moisture at the 150 cm depth than either the 75 or 25 cm depths. In 1983 a similar condition existed by August. The fact that moisture levels were high throughout the profile early in the 1985 growing season undoubtedly contributed to flow of leachate in the collection system. By monitoring moisture levels in April and May in 1986, one may be able to predict leachate flow based on knowledge of the precipitation regime for the previous two years.

6.2 SHRUB GROWTH ENHANCEMENT ON A SIMULATED MINE SITE AND/OR DISPOSAL PILE BENCH

1. Objectives and Rationale

Reclamation of areas disturbed by Tract C-a activities will be accomplished according to a state and federally approved reclamation plan. Reclamation techniques implemented by RBOSC are expected to result in adequate habitat for livestock and wildlife. Additional steps which reduce the amount of time necessary to establish such habitat are desirable. Shrub growth enhancement through water harvesting is an example of one such technique. The objective of this study is to test water harvesting techniques as a means of habitat establishment and enhancement.

In the semiarid environment of the Piceance Basin, increased shrub growth may be achieved by augmenting soil moisture via water harvesting techniques. Water harvesting is a technique designed to conserve and more efficiently utilize normal runoff by concentrating runoff from a large area into a smaller area where it is available for use by plants.

To reduce the potential for soil erosion, benches may be required on slopes resulting from Tract C-a mining and/or disposal activities. To test the influence of increased moisture on shrub growth for wildlife cover, water harvesting techniques are being incorporated into a simulated mine site/disposal pile bench on a southeast-facing slope within Box Elder Gulch on Tract C-a.

2. Methods

The design of the simulated mine site/disposal pile bench is presented in Figures 6-4 and 6-5. Water from accumulated snowpack, runoff from snowmelt, and rainfall should concentrate along the two rows of shrubs on the 6:1 (horizontal:vertical) bench slope (Rows B and C). Increased moisture should also be available to the shrubs in the water bar below the bench (Row E). The rows of shrubs on the 3:1 slope between the

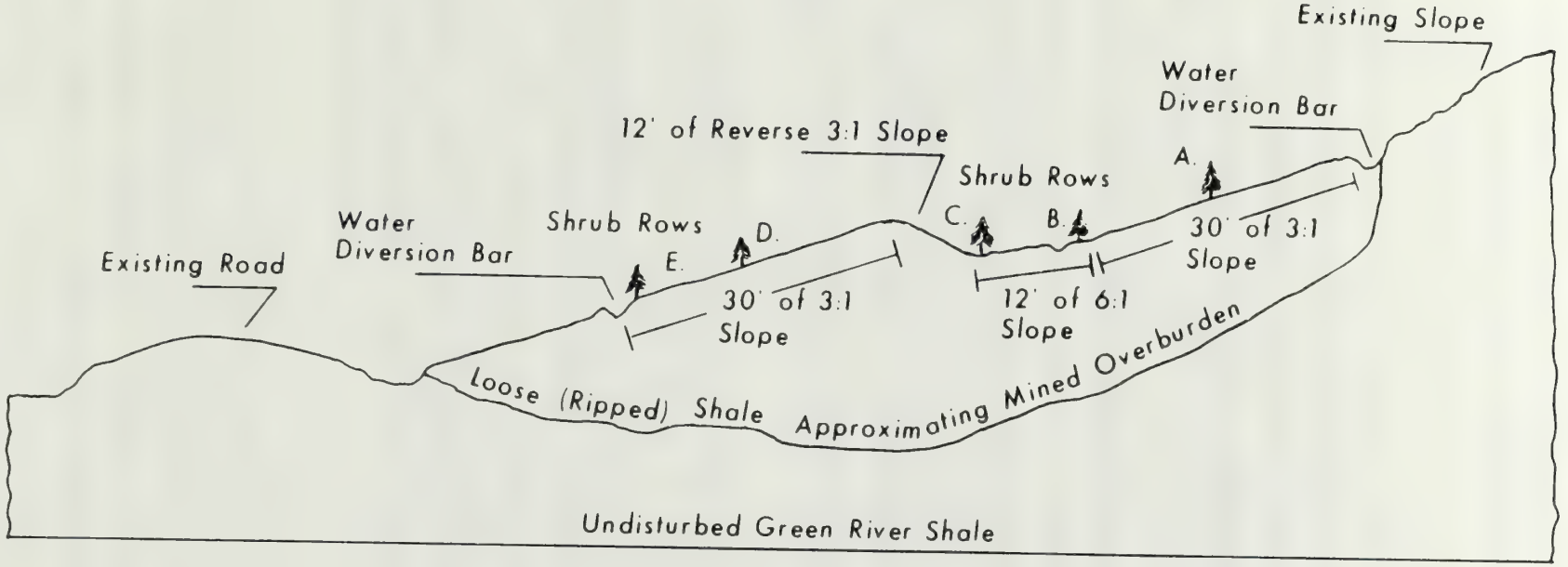


Figure 6-4. Cross Section of Simulated Mine Bench for Testing of Shrub Growth through Water Harvesting.

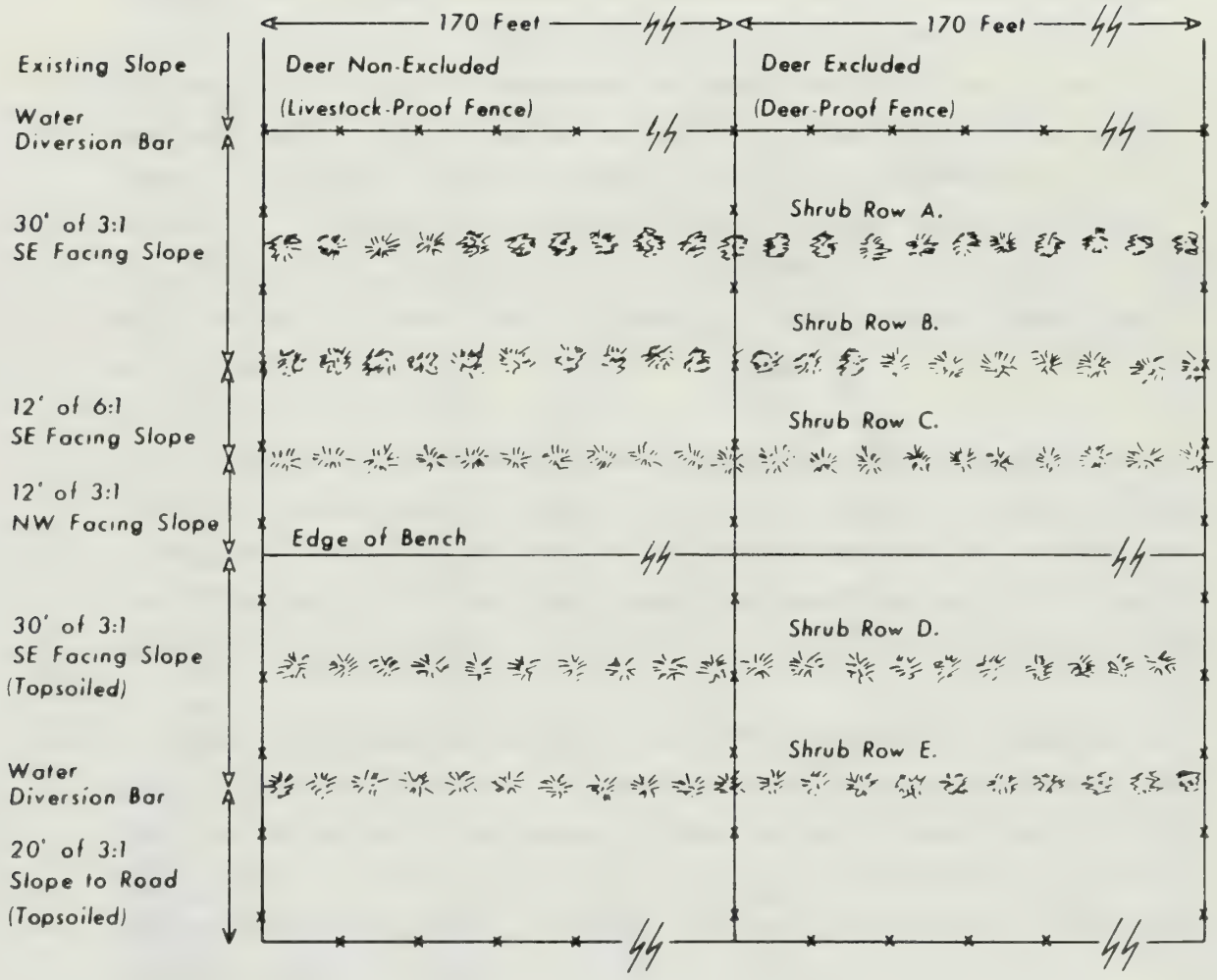


Figure 6-5. Aerial View of Simulated Mine Bench for Testing Enhancement of Shrub Growth through Water Harvesting.

bench and the lower water bar (Row D), and the row of shrubs above the bench (Row A) serve as controls, where shrub growth without increased moisture will be monitored.

In order to establish wildlife cover rapidly, five of the seven shrub species planted in the test area are not normally used as food by deer: New Mexico foresteria (Foresteria neomexicana), Apache plum (Fallugia paradoxa), New Mexico black locust (Robinea neomexicana), oldman wormwood (Artemisia abrotanum), and skunkbrush sumac (Rhus trilobata). Serviceberry (Amelanchier alnifolia) and fourwing saltbush (Atriplex canescens), choice deer food, were included to test the effect of deer browsing pressure on shrub growth. One-half of the test is fenced to exclude deer and cattle, and the other half is fenced to exclude cattle but allow deer entry. All shrub species were planted as tubelings in June of 1982. Shrubs were watered at the time of planting and irrigated as necessary during the first summer to ensure establishment. All areas between shrub rows were planted with the RBOSC seed mixture illustrated on Table 6-14.

It should be noted that two individuals of each of the shrub species - serviceberry, oldman wormwood, Apache plume and skunkbrush sumac were planted at each designated location in Rows B and C to insure adequate survival for testing purposes. The weaker individual was removed at the beginning of the 1984 growing season. It should also be noted that these species were of greenhouse stock, eight months old; that individuals of the fourwing saltbush were of uneven age, from eight to eighteen months; and, that the New Mexico black locust and New Mexico foresteria were 18 months old at planting.

The ultimate goal of harvesting water to enhance shrub growth on the simulated mine bench test is to provide vegetation cover for deer within four years. In the Piceance Basin, this cover is necessary for thermal protection and predator avoidance. This cover is normally provided by pinyon-juniper forests, tall sagebrush in bottomlands and other areas of tall, dense vegetation. At the onset of this test, it was decided that a shrub height of four feet (ca 120 cm) would be the lower limit of

Table 6-14. Seed Mixture Used in Final Reclamation by RBOSC.

Plant Species	Seeding Rate (Kg/Ha)
Pubescent Wheatgrass (Agropyron trichophorum)	3.0
Western Wheatgrass (Agropyron smithii)	4.2
Streambank Wheatgrass (Agropyron riparium)	2.4
Indian Ricegrass (Oryzopsis hymenoides)	1.8
Green Needlegrass (Stipa viridula)	1.8
Smooth Brome (Bromus inermis)	1.8
Cicer Milkvetch (Astragalus cicer)	1.8
Yellow Sweetclover (Melilotus officinalis)	0.9
Lewis Flax (Linum lewisii)	1.2
Winterfat (Ceratoides lanata)	1.2
Fourwing Saltbush (Atriplex canescens)	1.2
Bitterbrush (Purshia tridentata)	1.2
TOTAL	22.50

adequate cover for mule deer. A similar sized diameter was also considered important for each shrub. Because the seven species of shrubs used in the test have different growth rates and physiognomy, it was necessary to compare shrub growth performance by a common index. A plant height - plant diameter (PH-PD) index was developed, as derived by the following formula:

$$PH\text{-}PD = \frac{\frac{\text{Shrub Height (cm)}}{120\text{ cm}} + \frac{\text{Shrub Diameter (cm)}}{120\text{ cm}}}{2}$$

This index provides information on how well shrubs in the various treatments on the simulated mine bench achieve the lower limit of adequate cover (120 cm). This lower limit will be reached when the PH-PD index is equal to one.

Shrub measurements (plant height and diameter) of each individual are made on a monthly basis during the growing season. These data are then used in determining the PH-PD index. Plant mortality was also noted each month.

In order to test the effectiveness of the water harvesting technique, moisture content is normally measured monthly during the growing season within the soil profiles on control and treatment portions of the simulated bench. Permanently placed soil access tubes allow for repeated soil moisture determinations at the same locations using the Troxler Depth Moisture Gauge. During the 1985 growing season, moisture determinations were made from May through September.

Success of revegetation efforts between shrub rows (those areas seeded with species listed on Table 6-14) is monitored along permanently established transects within treatment areas. Transects are placed during the first growing season after planting and are marked at both ends with stakes. Aluminum marking tags identifying the transect number, as well as the beginning and/or end of the transect, are

attached to these stakes. Transects are 40 m in length and are oriented perpendicular to the existing slope.

Cover of grasses, forbs and shrubs is typically estimated within sampling frames (1 m^2) placed at five-meter intervals along the transects. A meter tape stretched between the stakes at either end of the transect allows exact placement of these frames. Sampling frames are subdivided into 5 percent segments and cover of individual species is estimated to the nearest one percent. All are recorded on field data forms, which are formatted for direct computer entry. Cover along these transects was not monitored during 1985.

3. Results and Discussion

a. Shrub Survival - Percent survival of all shrub species by treatment is presented in Table 6-15. From this table it can be seen that different shrub species and different treatments exhibited varying survival rates, with the overall averages being 78 and 62 percent for deer excluded and deer not excluded portions of the site, respectively. This represents a slight decrease in survival percentage from that reported in 1984.

Serviceberry, oldman wormwood, New Mexico foresteria, skunkbrush sumac, and New Mexico black locust all had some mortality during the year. The lowest overall survival was again exhibited by serviceberry, and this survival percentage was markedly enhanced by the double plantings in Rows B and C. Serviceberry is probably not a suitable species for reclaiming southeast-facing slopes in the vicinity of Tract C-a (at an elevation of 7,000 feet), unless a more drought resistant species such as A utahensis is used.

New Mexico black locust had the highest survival percentage, averaging 96 percent over the entire study site. Some mortality occurred on Row C as compared to 1984 results. The high survival percentages seem to be due in part to the fact that this species was planted only in Rows B

Table 6-15. Percent Survival of all Shrub Species by Treatment on the Simulated Mine Bench Test in September 1985 after Four Growing Seasons.

	Deer Excluded Row						Deer Not Excluded Row					
	A	B	C	D	E	Ave.	A	B	C	D	E	Ave.
Amelanchier alnifolia	33	50	67	17	33	40	0	57	67	0	0	25
Artemisia abrotanum	100	80	100	67	33	76	100	100	100	33	33	73
Atriplex canescens	ND	57	100	100	50	77	ND	0	17	71	0	22
Fallugia paradoxa	ND	100	100	ND	ND	100	ND	60	83	ND	ND	72
Foresteria neomexicana	ND	100	100	67	83	88	ND	83	100	67	67	79
Rhus trilobata	83	100	100	67	17	73	67	100	100	33	17	63
Robinea neomexicana	ND	100	83	ND	ND	92	ND	100	100	ND	ND	100
AVERAGE	72	84	93	64	43	78	56	71	81	41	23	62

ND - Indicates no data because shrubs of a particular species were not planted in that treatment.

and C, which generally had the highest survival percentages for all species tested.

Fourwing saltbush exhibited no decline in survival rate for 1985 as compared to 1984, when fourwing saltbush had the highest mortality of all shrubs. It may be that cold, dessicating winters are deleterious to survival of fourwing saltbush (D. McArthur personal communication), but this was not evident for 1985. Fourwing saltbush matures and produces seed sooner than other shrubs; therefore, populations of fourwing may not be affected by mortality related to climatic conditions if the intervals between the critical minimum temperature/precipitation episodes are long enough to allow for production of viable seed. However, if such mortality occurs at regular intervals, individual plants would seldom reach sufficient size to provide wildlife cover.

It is unknown why the New Mexico black locust, New Mexico foresteria and skunkbrush sumac suffered mortality. Mortality of these species occurred both where deer had access for browsing as well as where deer were excluded. Consequently, mortality could have been related to both climate and browsing pressure.

The effects of excluding deer from browsing on the shrubs appear noticeable for most species tested based on results for 1985. All species except New Mexico black locust had higher survival percentages on portions of the bench where deer were excluded from browsing. This seemed to be the case regardless of whether the species in question was palatable to deer or not. However, in the case of serviceberry and fourwing saltbush which are both used by deer for browse, survival percentages were markedly lower than for non-browse species on the portion of the plot where deer were not excluded. Consequently, there seems to be some benefit to planting non-browse species when the objective is to develop cover for wildlife.

As in 1983 and 1984, the row with the highest overall survival was Row C. This row is located at the interface of the 6:1 southeast-facing bench slope and the 3:1 northwest-facing reverse grade slope. This area

generally has a deep (18-24 in.) snowpack during the winter and is somewhat sheltered from the southwest-trending winds. However, the soil moisture tests for 1985 showed that Row C did not differ appreciably from other rows during the growing season. Increased survival along Row C may be attributable more to shrub protection by snowpack and the reverse grade slope than to variations in moisture availability.

As in 1983 and 1984, the lowest shrub survival was in Row E, the waterbar/topsoil treatment. One might expect that snowpack within the waterbar would afford protection similar to that on the bench but survival data do not support this contention.

b. Shrub Growth - Means for the PH-PD index, a measurement of overall growth attainment, for each shrub species by row and fence treatment during September 1985 are presented in Table 6-16. Greater overall plant growth is represented by larger numbers in this table. Individual shrub measurements for September 1985 are presented in Appendix 6-2.1.

Overall shrub growth varied among treatments in 1985 as compared to 1984 results. Decreases were noted in plant PH-PD indices for serviceberry, oldman wormwood, skunkbrush sumac and New Mexico Black locust, whereas increases were recorded for New Mexico foresteria, fourwing saltbush and Apache plume. The average PH-PD index for all species was higher on the portion of the site where deer were excluded, 0.49, in comparison to a PH-PD index of 0.39 where deer were allowed to browse. This represented a decrease for 1985 as compared to 1984 on areas browsed by deer.

The most notable increase occurred in the fourwing saltbush individuals where deer were excluded from browsing. The PH-PD index of 1.02 recorded for fourwing saltbush indicated that this was the only species to reach the minimum requirements for wildlife cover (Table 6-16). Although fourwing saltbush on portions of the site where deer are not excluded may reach an index of 1.0 in the near future, few of the other species tested appear to show promise of reaching the mimimum proportions within five years of growth. Dieback during the winter season

Table 6-16. Means of the Plant Height-Plant Diameter (PH-PD) Index for Each Shrub Species by Treatment on the Simulated Mine Bench Test in September 1985 after Four Growing Seasons.

	Deer Excluded Row						Deer Not Excluded Row					
	A	B	C	D	E	Ave.	A	B	C	D	E	Ave.
Amelanchier alnifolia	.20	.27	.22	.03	.14	.17	0	.21	.18	0	0	.20
Artemisia abrotanum	.37	.40	.44	.24	.42	.37	.30	.22	.44	.26	.20	.28
Atriplex canescens	ND	.84	1.07	1.13	1.05	1.02	ND	0	.68	1.11	0	.90
Fallugia paradoxa	ND	.55	.49	ND	ND	.52	ND	.35	.52	ND	ND	.44
Foresteria neomexicana	ND	.40	.38	.29	.38	.36	ND	.41	.36	.27	.18	.30
Rhus trilobata	.40	.35	.30	.21	.59	.37	.36	.23	.24	.25	.25	.27
Robinea neomexicana	ND	.52	.68	ND	ND	.60	ND	.32	.34	ND	ND	.33
AVERAGE						.49						.39

ND - Indicates no data available because shrubs of a particular species were not planted in that treatment.

seems to be the cause of reduced growth for New Mexico Black locust and may also contribute to low PH-PD indices for the other species as well.

Results of ANOVA tests comparing 1985 PH-PD indices among rows and between fencing treatments showed several significant differences (Table 6-17, Appendix 6-2.2). Oldman wormwood exhibited a PH-PD index on Row C that was significantly higher than for all other rows except A. Furthermore, growth of oldman wormwood was significantly higher on the portion of the site excluding browsing. New Mexico Black locust also had significantly better growth where browsing was excluded. Although visual inspection of the data reveals other differences among rows and/or fencing treatments, variations noted for other species were not significant. Consequently, after four years of growth there were few statistically significant differences in growth which could be attributed to position on the bench or to the influences of browsing pressure.

c. Soil Moisture - Neutron probe moisture determinations data are summarized on Table 6-18 and are presented in their entirety in Appendix 6-2.1. Moisture levels were typically highest at all depths within the soil profile during the May sampling period. Moisture levels then decreased during June and July, showed a slight increase in August, and then were at their lowest levels in September. Variations among rows were slight; however, highest average moisture readings were found on Rows B, C and E. Moisture determinations for 1985 were slightly lower than those recorded during 1983, the most recent year for which a complete data set is available. Precipitation was also lower during the 1985 growing season as compared to the 1983 growing season. Therefore, as would be expected, moisture determinations seem to have mirrored precipitation.

Statistical comparisons of moisture determinations among rows and among access tube locations along rows indicate that a number of significant differences exist based on 1985 data (Table 6-19). Significant differences are illustrated on Duncan's Multiple Range Test results which are included in Appendix 6-2.2. These results show that significant differences in moisture exist among rows at all three sample depths (25, 75 and 150 cm). Moisture is higher in surface soils along Rows B, C and E

Table 6-17. Summary of ANOVA Results Comparing Plant Height - Plant Diameter (PH-PD) Indices Among Rows and Fencing Treatments on the Simulated Mine Bench Test for September 1985.[1/]

Species	Source of Variation: Row		Fencing Treatment	
	F	PR>F[2/]	F	PR>F[2/]
Amelanchier alnifolia	1.23	0.3455	1.41	0.2565
Artemisia abrotanum	4.50**	0.0045	6.06**	0.0185
Atriplex canescens	1.38	0.2782	0.78	0.3881
Fallugia paradoxa	0.10	0.7613	0.46	0.5073
Foresteria neomexicana	2.61	0.0665	2.14	0.1520
Rhus trilobota	2.43	0.0660	3.28	0.0787
Robinea neomexicana	0.40	0.5337	11.97**	0.0024

* Significant at $\alpha = 0.05$

** Significant at $\alpha = 0.025$

1/ Duncan's Multiple Range Test Results for Significant Main Effect Differences are Included in Appendix 6-2.2.

2/ Represents the Significance Probability (α) Associated with F.

TABLE 6-18. MEAN MONTHLY MOISTURE DETERMINATIONS (NEUTRON PROBE-DIRECT READINGS, PERCENT VOLUME) FOR THREE DEPTHS SAMPLED IN FIVE ROWS ON THE BENCH DURING 1985

SAMPLE MONTH	ROW A			ROW B			ROW C			ROW D			ROW E		
	25CM	75CM	150CM	25CM	75CM	150CM	25CM	75CM	150CM	25CM	75CM	150CM	25CM	75CM	150CM
MAY	30.6	30.1	31.6	31.6	29.5	31.4	29.4	29.0	31.1	22.0	21.1	29.2	32.2	33.5	33.0
JUNE	21.7	28.2	30.5	27.4	28.4	30.5	25.1	28.4	29.3	19.0	20.0	27.8	23.9	29.7	32.2
JULY	19.4	27.2	30.0	25.6	27.7	31.0	22.2	27.4	29.2	17.3	18.4	26.1	20.0	25.6	30.2
AUGUST	21.1	26.7	30.4	25.7	28.0	31.1	26.6	29.0	30.9	20.5	19.2	27.2	26.8	26.3	30.0
SEPTEMBER	17.9	25.8	29.4	22.3	26.8	31.2	24.6	27.3	29.8	18.3	18.3	26.0	24.4	25.4	28.8
SUMMARY STATISTICS															
MEAN	22.2	27.6	30.4	26.5	28.1	31.0	25.6	28.2	30.0	19.4	19.4	27.3	25.5	28.1	30.9
STANDARD DEVIATION	2.5	3.7	5.1	4.0	3.0	3.5	3.6	3.1	5.4	3.5	2.6	5.7	2.8	3.7	5.5

Table 6-19. Summary of ANOVA Results Comparing 1985 Moisture Determinations at Three Depths (25, 75, 150 cm) by Row and Access Tube Location on the Simulated Bench Study Site, Tract C-a.

Sample Depth (cm)	Source of Variation: Row F	Row PR>F[2/]	Access Tube Location F	Access Tube Location PR>F[2/]
25	12.09**	0.0001	1.57	0.1468
75	44.41**	0.0001	18.04**	0.0001
150	5.20**	0.0006	21.22**	0.0001

* Significant at $\alpha = 0.05$

** Significant at $\alpha = 0.025$

1/ Duncan's Multiple Range Test Results for Significant Main Effects are Presented in Appendix 6-2.2.

2/ Represents the Significance Probability (α) Associated with F.

than along Rows A and D. As depth within the profile increases, Duncan's results shows that Row A is grouped with all other rows except D. Higher moisture determinations in Rows B, C and E support the hypothesis that water harvesting increases moisture on the bench (Rows B and C) as well as within the water bar (Row E). While this appears to be the case for surface soils, it does not necessarily hold true for the 75 and 150 cm depths.

The aforementioned differences in moisture do not appear to have resulted in variations in growth of shrubs. Data on PH-PD indices would seem to indicate that variations in growth are not related to location of shrubs by row on the bench (see Table 6-17). Consequently, variations in moisture among rows have not resulted in variations in growth of shrubs. Oldman wormwood was the only species that exhibited significant differences in growth among rows. In this instance, growth was higher in Row C than in any other row, with the exception of A. Row C exhibits higher moisture than Row A (Appendix 6-2.2) but is not significantly different from Rows B and E. However, growth of wormwood in Rows B and E does not equal that of Row C. Therefore, there does not seem to be a direct cause and effect relationship between soil moisture and plant growth for the species tested on this site.

Significant differences in moisture among access tube locations were also evident at the mid- and bottom sample depths (Appendix 6-2.2). These data seem to indicate movement of moisture which is controlled in part by the local topography rather than by the bench configuration. No differences were noted in moisture of surface soils based on access tube location, in spite of the fact that surface soils exhibited increased moisture by virtue of their location on the bench per se or within the water bar. If shrub roots have reached the 75 and 150 cm depths within the soil profile on the study site, it is possible that shrub growth is being influenced in part by location along individual transects. Such a phenomenon is not totally unexpected given the presence of several gullies which dissected the study site prior to recontouring the area. In any case, Duncan's Multiple Range Test results show that location 2 (near the northeastern end of the bench) is the only location which has significantly lower soil moisture.

6.3 COMPARISON STUDY OF INHALABLE AND TOTAL SUSPENDED PARTICULATES

1. Objectives and Rationale

Many investigations have shown that the range of particle sizes measured in the current National Ambient Air Quality Standard for Total Suspended Particulates (TSP) do not directly address health-related concerns. The major reason for this is that particles collected by TSP monitors have diameters up to a maximum of approximately 30-50 um, whereas particles with diameters larger than 10 to 15 um are excluded from the body by natural defense mechanisms in the respiratory system. At the same time, the larger particles have an inordinately large influence on a gravimetric sampling technique such as used for TSP, since the mass of a particle is generally proportional to the third power of the radius of a particle.

As a result, EPA is currently in the process of changing the present TSP standard to a more health-related inhalable particulate standard. The new standard has been proposed with a 50 percent particle cutpoint (or rejection point) at 10 um, and will be referred to as PM_{10}. The American Mining Congress (AMC) has proposed an alternative PM_6 standard, which has a 50 percent particle cutpoint at 6 um.

In order to determine the impact of a possible new standard on our permitting activities, and to be able to intelligently comment on the proposed regulations, PM_{10} monitors were installed at the existing sites toward the end of 1982. In addition, a PM_6 monitor, specially designed and built for the AMC, was installed in October 1983.

2. Methods

One PM_{10} monitor was colocated with each of the existing TSP monitors at Sites 1 and 3. These PM_{10} samplers are standard Hi-Vol monitors modified with a Wedding PM_{10} inlet. A PM_6 monitor, fitted with a specially designed Wedding PM_6 inlet, was also colocated at Site 1.

3. Results and Discussion

The TSP, PM_{10} and PM_6 data for 1985 are listed in Table 6-20. The geometric means, arithmetic means and maximum concentration for each season and for the year are presented in Table 6-21. The second highest TSP concentrations during 1985 were 32 ug/m^3 at Site 3 and 30 ug/m^3 at Site 1. This is far below the 24-hr secondary NAAQS of 150 ug/m^3. The 1985 annual average concentrations are also quite low, with a geometric mean of 9 ug/m^3 at Site 3 and 8 ug/m^3 at Site 1. More traffic in the vicinity of Site 3 probably accounted for the slightly higher concentrations measured at that site.

The second highest 24-hr concentrations of TSP, PM_{10}, and PM_6 during 1985 at Site 1 were 30, 14, and 10 ug/m^3, respectively. The second highest 24-hr concentrations of TSP and PM_{10} data during 1985 at Site 3 were 32 and 12 ug/m^3, respectively. The annual geometric means for PM_{10} at Sites 1 and 3 are 48 and 46 percent, respectively, of the annual geometric means for TSP at the same sites. Similarly, the annual arithmetic means for PM_{10} are 48 and 41 percent at Sites 1 and 3, respectively, of the annual arithmetic means for TSP. The geometric and arithmetic means of PM_6 at Site 1 are both 36 percent of the respective geometric and arithmetic means of TSP at Site 1.

In all cases, the arithmetic average (proposed in EPA regulations) is higher than the geometric average. The increase in the annual arithmetic mean over the geometric mean is moderate for TSP data (a 4 ug/m^3 increase for both sites), and low for the inhalable particulate data (less than 2 ug/m^3). Part of the reason for a small difference between the geometric and arithmetic means is due to the low particulate matter concentrations currently being measured at the tract.

Figures 6-6 and 6-7 present the distribution of TSP, PM_{10} and PM_6 concentrations at Sites 1 and 3, respectively, during 1985. The figures show that PM_6 has the lowest range of concentrations (0-13 ug/m^3 at Site 1, followed by PM_{10} (0-16 ug/m^3 at Site 1, and 0-13 ug/m^3 at Site 3), and by TSP (0-31 ug/m^3 at Site 1, and 0-35 ug/m^3 at Site 3).

TABLE 6-20. INHALABLE (PM10) AND TOTAL SUSPENDED PARTICULATE (TSP) CONCENTRATIONS (UG/M3) FOR 1985 AT TRACT C-A.

	SITE 1			SITE 3	
DATE	TSP	PM-10	PM-6	TSP	PM-10
12JUL85	26	11	7	31	12
16JUL85	19	8	6	23	9
20JUL85	8	7	4	10	9
24JUL85	20	14	9	18	11
28JUL85	14	10	5	16	7
01AUG85	14	9	6	18	7
05AUG85	19	11	7	.	8
09AUG85	28	12	.	26	9
13AUG85	18	6	5	32	11
17AUG85	31	11	8	30	9
21AUG85	25	10	7	.	9
25AUG85	15	4	5	.	7
29AUG85	17	9	7	.	11
02SEP85	14	4	4	19	6
06SEP85	15	4	3	21	5
10SEP85	22	10	1	23	8
14SEP85	25	8	.	30	9
22SEP85	.	.	.	11	4
26SEP85	.	6	3	15	5
30SEP85	.	5	4	10	4
04OCT85	.	3	3	14	3
08OCT85	2	0	0	2	0
12OCT85	6	5	1	4	3
16OCT85	6	3	2	6	2
20OCT85	10	6	4	14	5
24OCT85	3	1	1	6	1
28OCT85	11	6	5	35	10
01NOV85	6	3	3	6	0
09NOV85	9	2	2	10	0
13NOV85	2	0	0	1	.
17NOV85	3	1	2	8	1
21NOV85	6	2	3	8	2
25NOV85	3	0	0	3	1
29NOV85	1	0	1	1	0
03DEC85	2	0	1	1	0
07DEC85	4	5	5	6	1
11DEC85	3	1	0	3	0
19DEC85	5	3	2	3	2
23DEC85	5	2	1	4	1

TABLE 6-20. INHALABLE (PM10) AND TOTAL SUSPENDED PARTICULATE (TSP) CONCENTRATIONS (UG/M3) FOR 1985 AT TRACT C-A.

	SITE 1			SITE 3	
DATE	TSP	PM-10	PM-6	TSP	PM-10
01JAN85	.	.	.	4	3
05JAN85	8	6	6	3	4
09JAN85	6	6	6	5	5
13JAN85	5	3	4	.	3
17JAN85	3	3	2	2	.
21JAN85	3	2	4	5	5
25JAN85	0	1	.	3	3
29JAN85	4	3	3	6	5
02FEB85	5	4	3	7	5
06FEB85	4	2	2	4	3
10FEB85	2	2	0	2	1
14FEB85	1	2	0	1	0
18FEB85	.	1	0	2	.
22FEB85	1	1	1	2	1
26FEB85	4	2	0	1	1
02MAR85	20	8	5	25	.
06MAR85	25	12	8	28	12
10MAR85	4	3	1	.	4
14MAR85	9	6	4	5	3
18MAR85	8	5	5	5	.
22MAR85	15	8	6	16	8
26MAR85	12	7	5	19	7
30MAR85	3	3	2	5	3
03APR85	14	8	6	12	.
07APR85	11	10	8	10	2
11APR85	15	7	2	14	.
15APR85	12	7	9	11	6
19APR85	5	3	1	5	.
23APR85	4	1	0	3	2
01MAY85	17	14	8	15	9
05MAY85	26	.	10	21	13
09MAY85	9	.	3	.	.
13MAY85	8	3	4	10	5
21MAY85	.	1	0	4	1
25MAY85	14	6	5	13	.
29MAY85	27	8	6	26	.
02JUN85	12	5	4	12	.
06JUN85	13	6	5	15	.
10JUN85	16	7	5	17	.
14JUN85	22	10	7	31	12
18JUN85	23	11	8	30	11
22JUN85	21	12	7	29	12
26JUN85	.	.	.	19	4
30JUN85	.	12	9	29	11
04JUL85	22	11	8	25	3
08JUL85	30	16	13	31	.

Table 6-21. Quarterly and Annual Means (Geometric and Arithmetic) and Maximum Values of 24-Hour Average TSP, PM_{10} and PM_6 Concentrations (ug/m^3) Based on Fourth-Day Sampling During 1985 on Tract C-a

	Site 1			Site 3	
	TSP	PM_{10}	PM_6	TSP	PM_{10}
Winter 1985 (Jan., Feb., Dec.)					
Geometric Mean	2.8	2.0	1.6	3.0	1.7
Arithmetic Mean	3.4	2.5	2.3	3.4	2.6
Spring 1985 (Mar.-May)					
Geometric Mean	10.9	5.0	3.6	10.6	4.8
Arithmetic Mean	12.9	6.2	4.6	12.8	5.8
Summer 1985 (June-Aug.)					
Geometric Mean	18.6	9.0	6.4	22.1	8.3
Arithmetic Mean	19.6	9.5	6.7	23.3	8.7
Fall 1985 (Sept.-Nov.)					
Geometric Mean	6.1	2.4	1.8	8.1	2.2
Arithmetic Mean	8.5	3.4	2.2	11.8	3.5
1985 Annual					
Geometric Mean	8.1	3.9	2.9	8.7	3.6
Arithmetic Mean	11.5	5.5	4.1	12.8	5.2
Maximum	31	16	13	35	13
2nd Maximum	30	14	10	32	12

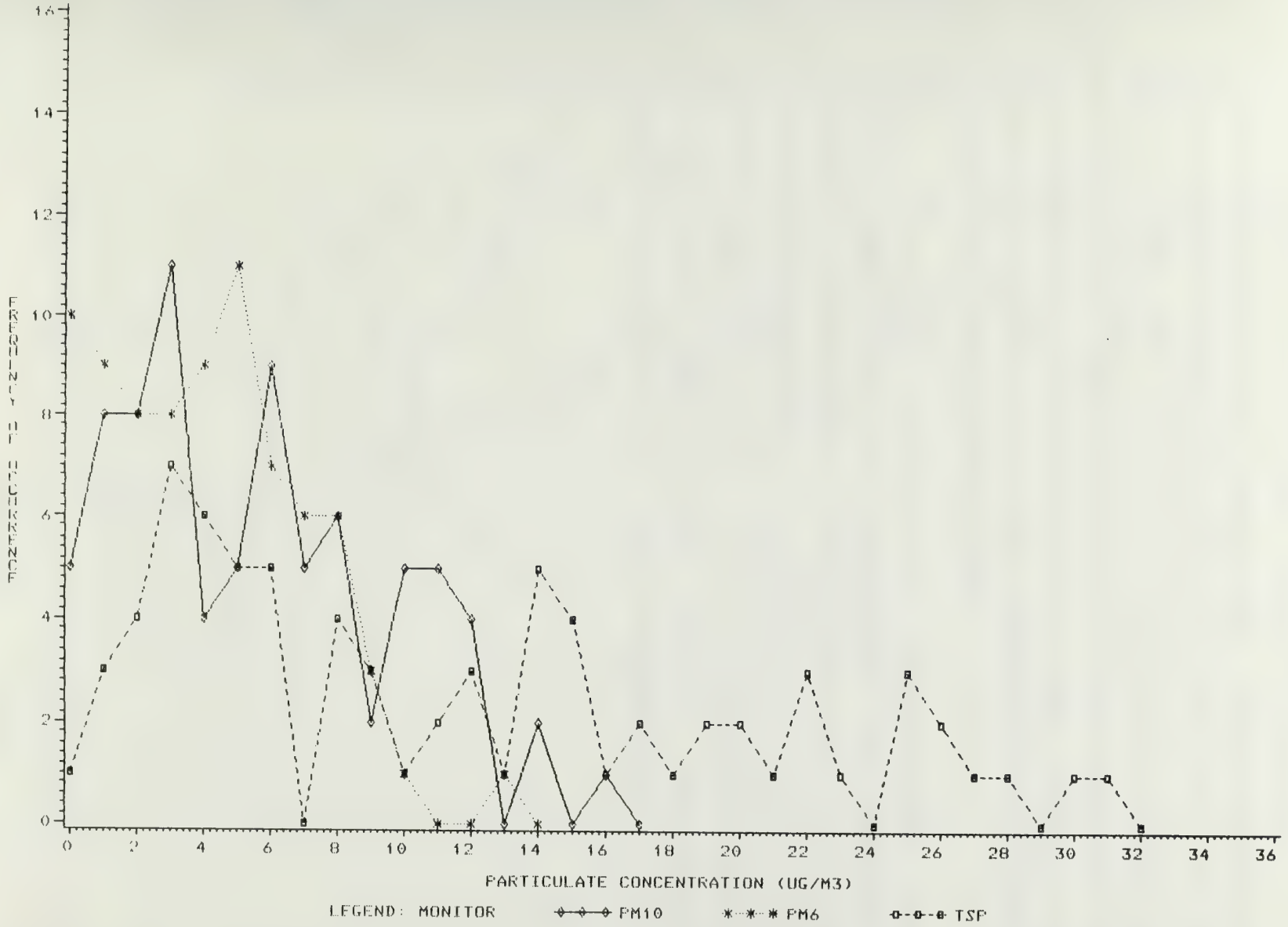


FIGURE 6-6. DISTRIBUTION OF TSP, PM10, AND PM6 CONCENTRATIONS IN 1985 AT SITE 1, TRACT C-A

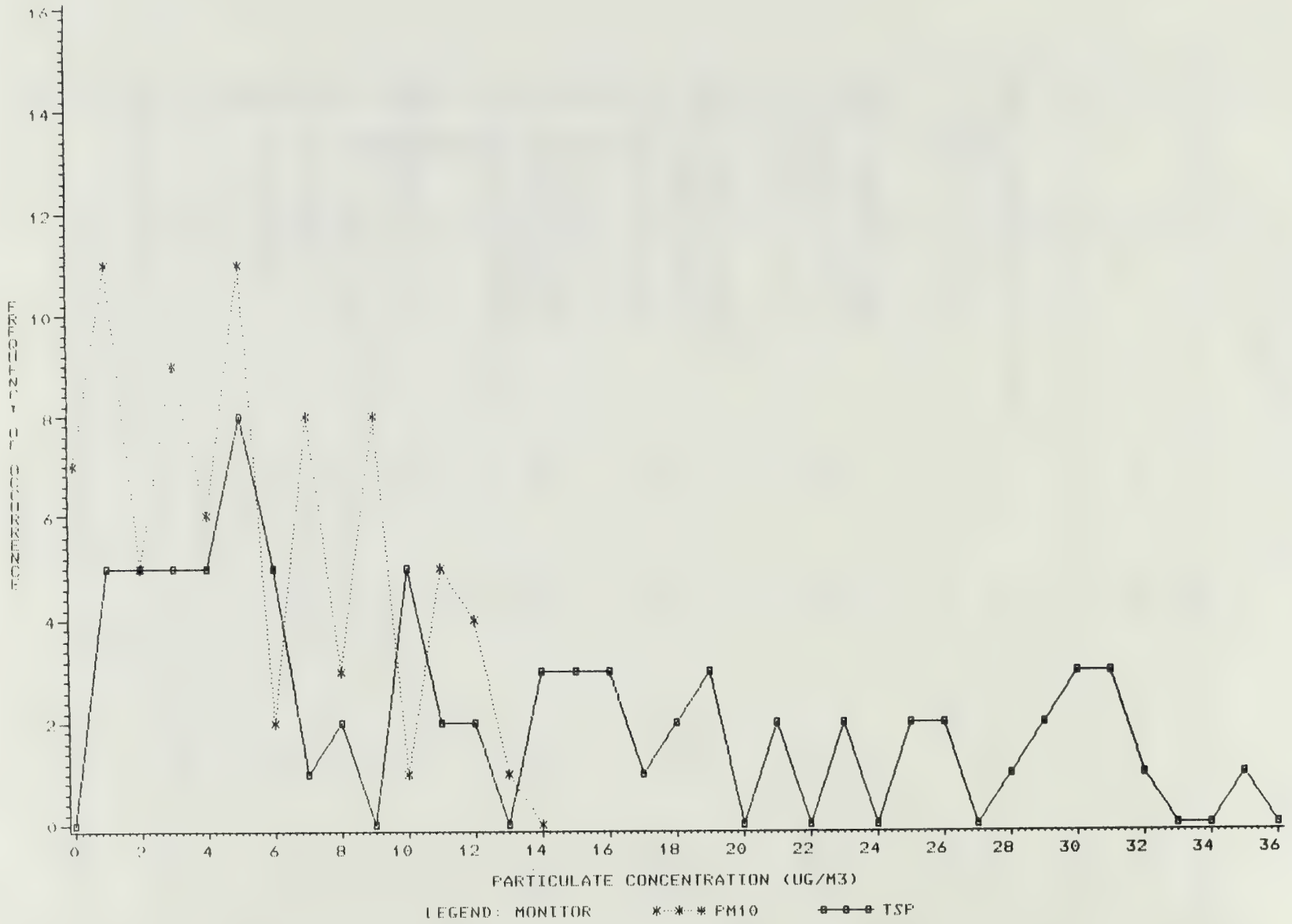


FIGURE 6-7. DISTRIBUTION OF TSP AND PM10 CONCENTRATIONS IN 1985 AT SITE 3, TRACT C-A.

Perhaps the most striking aspect of the data evident in the figures is the distinct differences in the distributions of the data -- the PM_{10} and PM_6 data have a fairly tight distribution with almost all of the concentrations at or below 12 ug/m^3, while the TSP distribution is strongly skewed toward higher concentrations. The higher TSP concentrations on the extended tail of the distribution may be partially related to the well-known sampling problems with the TSP inlet, such as inlet efficiency changes with changes in wind speed and direction. The skewed TSP distribution also explains why there is a greater difference in the arithmetic and geometric means of the TSP data than in the PM_{10} and PM_6 data (since the arithmetic mean weights extreme values in the distribution more heavily than the geometric mean).

Table 6-22 presents correlation coefficients and coefficients of determination for the TSP, PM_{10} and PM_6 1985 data sets. Two of the highest correlations were between the TSP and PM_{10} monitors at Site 1 and Site 3 (0.83 and 0.84, respectively). Thus, the variation of the TSP data was associated with between 68 and 70 percent of the PM_{10} data at the same site. The Site 1 TSP and PM_6 data sets were slightly less correlated ($r = 0.78$) than the TSP and PM_{10} data sets. There was a very high correlation ($r = 0.86$) between the Site 1 PM_{10} and PM_6 data sets.

Table 6-22. Correlation Coefficients (r) and Coefficients of Determination (r^2) for the 24-hour Average TSP, PM_{10} and PM_6 Data During 1984, Tract C-a.

Monitors/Sites Being Correlated	Correlations r	r^2	n
Site 1 TSP and Site 1 PM_{10}	0.83	0.68	76
Site 1 TSP and Site 1 PM_6	0.78	0.60	75
Site 1 PM_{10} and Site 1 PM_6	0.86	0.74	79
Site 3 TSP and Site 3 PM_{10}	0.84	0.70	77
Site 1 TSP and Site 3 TSP	0.87	0.76	72
Site 1 PM_{10} and Site 3 PM_{10}	0.81	0.66	74

6.4 RUN-OF-MINE-LYSIMETER

1. Objectives and Methods

The run-of-mine lysimeters objectives are described in RBOSC MDP monitoring report 11 (RBOSC 1983)

2. Results and Discussion

The 5, 10 and 15 foot lysimeters were monitored from April 18 through October 31, 1985 for leachate volume and conductivity. Total monthly volumes (liters) and mean conductivity data (micromhos per centimeter) are shown for each collector:

	5 Foot		10 Foot		15 Foot	
	Total liters	Average umhos/cm	Total liters	Average umhos/cm	Total liters	Average umhos/cm
April	6	5,583	>66	18,500	36	16,667
May	7	6,488	39	18,750	27	18,500
June	4.5	6,383	19	18,000	6	18,167
July	1	7,050	12	18,500	4	21,500
August	4	6,700	70	17,750	4	19,000
September	1	7,650	11	17,500	4	22,000
October	4	6,125	104	14,250	6	12,000

Mean conductivity of the leachate increases directly with raw shale depth. The 1985 conductivity means are lower than previous years means:

	Conductivity Means		
	1983	1984	1985
5 foot	15,150	8,189	6,426
10 foot	28,050	18,786	17,806
15 foot	27,350	21,667	18,194

This decrease would indicate, as expected, that raw shale leachate water quality improves with amount leached over time.

6.5 SUMMARY

A. Revegetation

Cover on Experimental Revegetation Plots R-1 and R-2 during 1985 was 41.1 and 43.2 percent, respectively, for all growth forms averaged over all treatment combinations tested. In both instances, these cover values represented reductions compared to 1984 data. Lower cover in 1985 was likely related to decreased precipitation during the 1985 growing season as compared to 1984. Planted grasses and forbs exhibited the most pronounced decreases in cover. For the first time since studies began in 1975, cover on Plot R-1 (northwest-facing site) was lower than that recorded on Plot R-2 (southeast-facing site). This seems to have occurred because Plot R-2 supports a greater percentage of shrub cover than does Plot R-1. Woody shrub species did not decline in cover to as great an extent as did the herbaceous grasses and forbs. Although statistically significant differences in cover between grazed and ungrazed portions of Plots R-1 and R-2 were not evident during 1985, a visual inspection of the sites indicated that grazing pressure on the northwest-facing Plot R-1 was greater than that for R-2.

Species composition on Plots R-1 and R-2 changed very little from 1984 to 1985. Wheatgrass species continued to dominate the herbaceous component; however, cicer milkvetch, Lewis flax and yellow sweetclover combined to produce forb cover nearly equal to that of the grasses. Yellow sweetclover was much more prevalent on Plot R-1 than R-2 but the converse was true for Indian ricegrass. Sagebrush, winterfat and rubber rabbitbrush were the most prominent shrub species present. Based on 1985 data, no statistically significant differences in cover were evident among mulch or fertilizer treatments tested.

Cover on Experimental Revegetation Plot R-3 was 65.5 percent for all growth forms averaged over all treatment combinations. This represented a decrease in cover relative to 1984 but was similar to the cover recorded at the site during 1983. Wheatgrasses, cicer milkvetch, fourwing saltbush and winterfat were the most prevalent species. Although cover of both

grasses and shrubs registered decreases in 1985 as compared to 1984, cover of forbs, primarily cicer milkvetch, actually increased. Aside from the milkvetch, the forb component of the revegetated plant community on Plot R-3 continued to be rather limited. This seemed to be due, in large part, to the competition from planted wheatgrass species, which are thriving.

Statistically significant differences in shrub cover based on substrate were evident for fourwing saltbush, rabbitbrush and winterfat on Plot R-3 during 1985. In all three instances cover was shown to be significantly higher on the treatment portion (underlain with processed shale) than on the control (no processed shale). In all likelihood, this difference in cover results from variations in seeding rate rather than the influence of processed shale under the reconstructed soil profile.

Leachate was collected from above and below the processed shale on Plot R-3 during 1985. This represented the first time leachate had been obtained from the collection system and seemed to be the result of two consecutive years of high precipitation during 1983 and 1984. Conductivity, most major cations and anions, DOC, TDS, total alkalinity and ammonia nitrogen levels were higher in the leachate passing through processed shale than that collected immediately above the shale.

Moisture levels within the reconstructed soil profile at the beginning of the 1985 growing season were nearly as high at the 150 cm depth as at the 25 cm depth, perhaps as a result of the high precipitation during the previous two years. High moisture levels early in the season may serve as indicators of leachate production during subsequent years. Statistical comparisons of soil moisture data at Plot R-3 revealed significant differences in moisture between substrates, between slope positions and among sample months for various times during the 1985 growing season.

B. Shrub Growth Enhancement on a Simulated Mine Site and/or Disposal Pile Bench

Shrub survival percentages on the Bench Site decreased for serviceberry, oldman wormwood, New Mexico foresteria, skunkbrush sumac and New Mexico

black locust between the 1984 and 1985 sample periods. The highest overall survival percentage (96%) was recorded for New Mexico black locust whereas serviceberry had the lowest percentage survival (32%). Fourwing saltbush was the only species which attained a plant height-plant diameter index of at least 1.0, which was judged to be the minimum growth required to afford adequate cover for wildlife. This growth was achieved only on the portion of the study site protected from both deer and livestock use. Based on four years of growth, it does not seem likely that any of the other species tested will provide this lower limit of growth necessary for wildlife cover in the near future.

Although moisture in surface soils (25 cm) along Rows B, C and E was significantly higher than for other rows on the Bench Site, growth of shrubs did not necessarily correspond to these areas of higher moisture. The only species to show any significant difference in growth among rows was oldman wormwood. Although its best growth corresponded to high surface moisture along Row C, growth success was not duplicated on other high moisture sites. Therefore, it can be concluded that water harvesting has been of limited success for promoting growth of the shrub species tested.

C. Comparison of Inhalable and Total Suspended Particulates

PM_{10} monitors (Hi-Vols fitted with Wedding PM_{10} inlets) were colocated at Sites 1 and 3 with TSP monitors. In addition, a PM_6 monitor (Hi-Vol fitted with a Wedding PM_6 inlet especially commissioned by the American Mining Congress) was colocated with the TSP and PM_{10} monitors at Site 1.

Measured particulate matter concentrations during 1985 were quite low, with a geometric mean annual TSP concentration of 9 ug/m^3 and a second highest 24-hr TSP concentration of 32 ug/m^3 recorded at Site 3 (which had slightly higher concentrations than Site 1). This is primarily a function of the low activity level around Tract C-a.

Second highest 24-hour concentrations at Site 1 during 1985 for TSP, PM_{10}, and PM_6 were 30, 14, and 10 ug/m^3, respectively. The annual geometric means for PM_{10} at Sites 1 and 3 were 48 and 46 percent, respectively, of

the annual geometric means for TSP at the same sites. The annual geometric mean of PM_6 at Site 1 was 36 percent of the annual geometric mean of TSP at Site 1.

The PM_{10} and PM_6 had roughly symmetrical distributions around the mode, while the TSP distributions were strongly skewed toward higher concentrations. Correlation coefficients between the TSP, PM_{10} and PM_6 data sets were relatively high (0.78 to 0.87).

D. Run-of-Mine Lysimeters

Leachate data for 1985 indicated that conductivity increased directly with the raw shale depth through which the moisture passed. However, conductivities of the leachate have been dropping since 1983, indicating that leachate quality can be expected to improve with time and with the quantity of leachate water passing through the system.

LITERATURE CITED

Rio Blanco Oil Shale Project. 1975. Quarterly progress report 4. Gulf Oil Corp. and Standard Oil Co. (Indiana).

Rio Blanco Oil Shale Company. 1977. Revegetation program 1976 annual report. Gulf Oil Corp. and Standard Oil Co. (Indiana).

_____. 1978. Revegetation program 1977 annual report. Gulf Oil Corp. and Standard Oil Co. (Indiana).

_____. 1979a. Revegetation program 1978 annual report. Gulf Oil Corp. and Standard Oil Co. (Indiana).

_____. 1980. Modular development phase monitoring report 5. Gulf Oil Corp. and Standard Oil Co. (Indiana).

_____. 1983. Modular development phase monitoring report 11, January 1982 - December 1982. Gulf Oil Corp. and Standard Oil Co. (Indiana).

APPENDICES

APPENDIX 2-O

Atmospheric Studies

APPENDIX 2-1

Meteorological Data

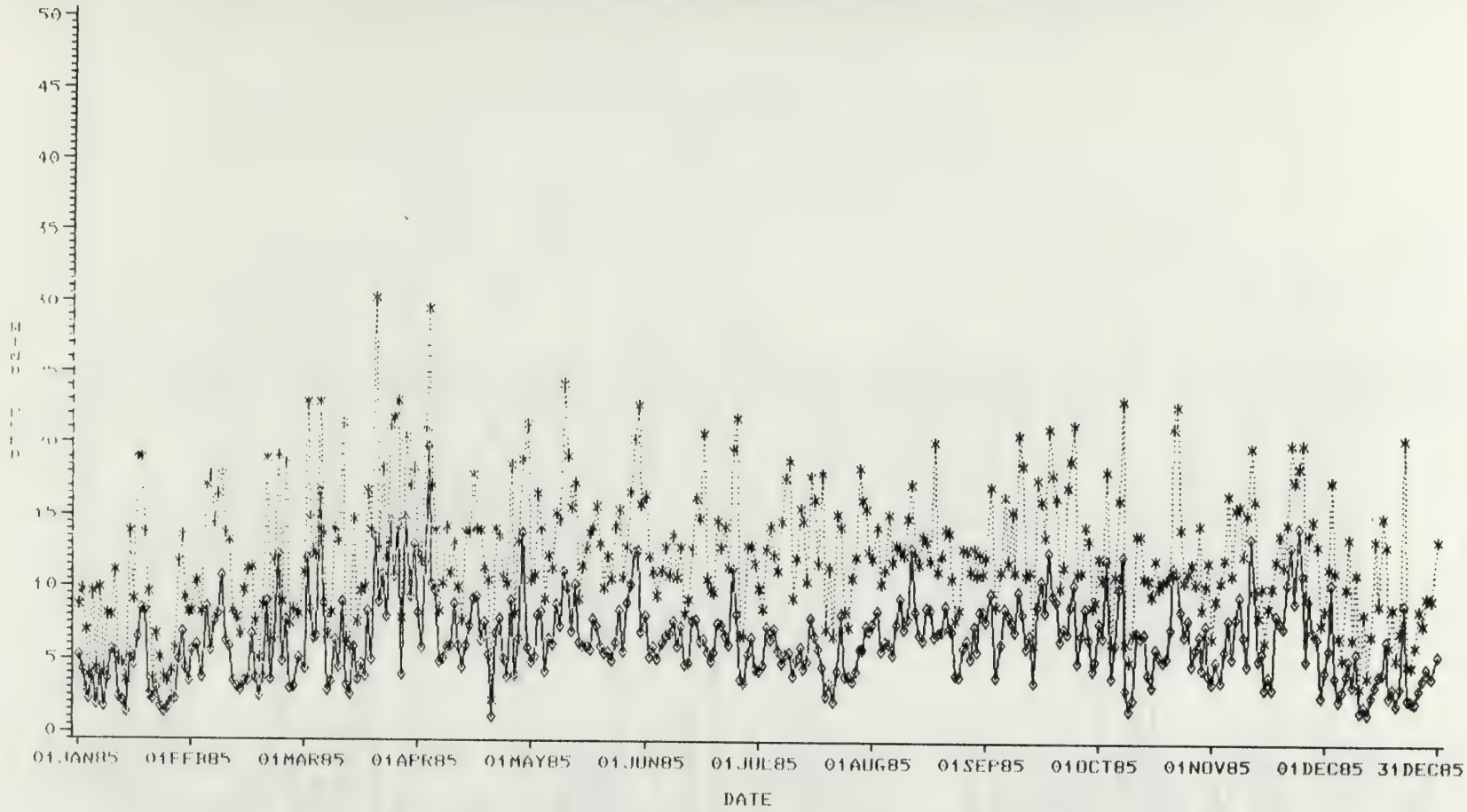
APPENDIX 2-1.1

Plots of Meteorological Data at Site 1

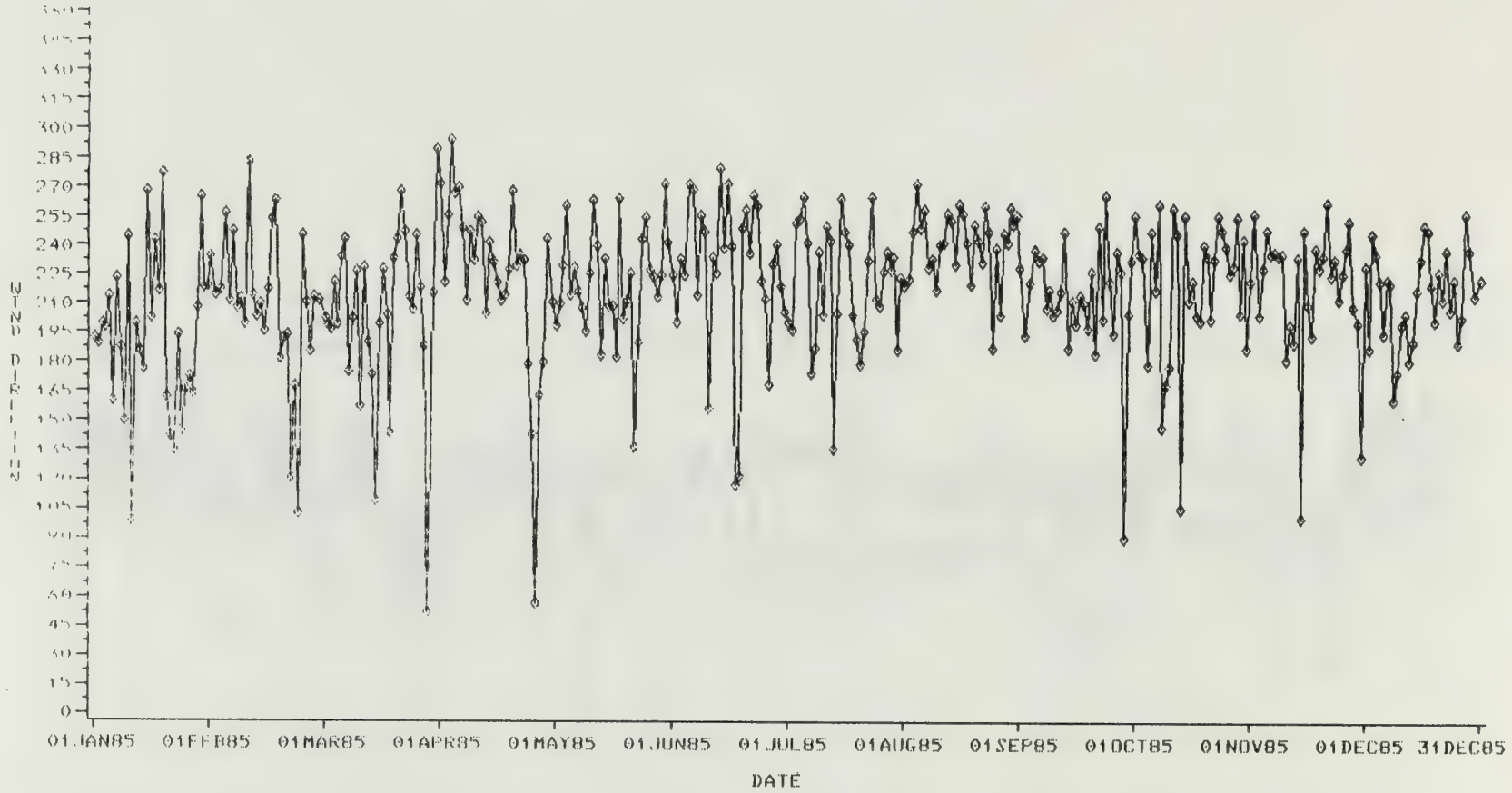
Note: The diamond symbols on each plot represent the 24-hr average value (with the exception of solar radiation, which is an average of daylight values, and precipitation, which is a 24-hr total).

The asterisk symbols on the wind speed and temperature plots represent the maximum 24-hr values, while the square symbols represent the minimum 24-hr values.

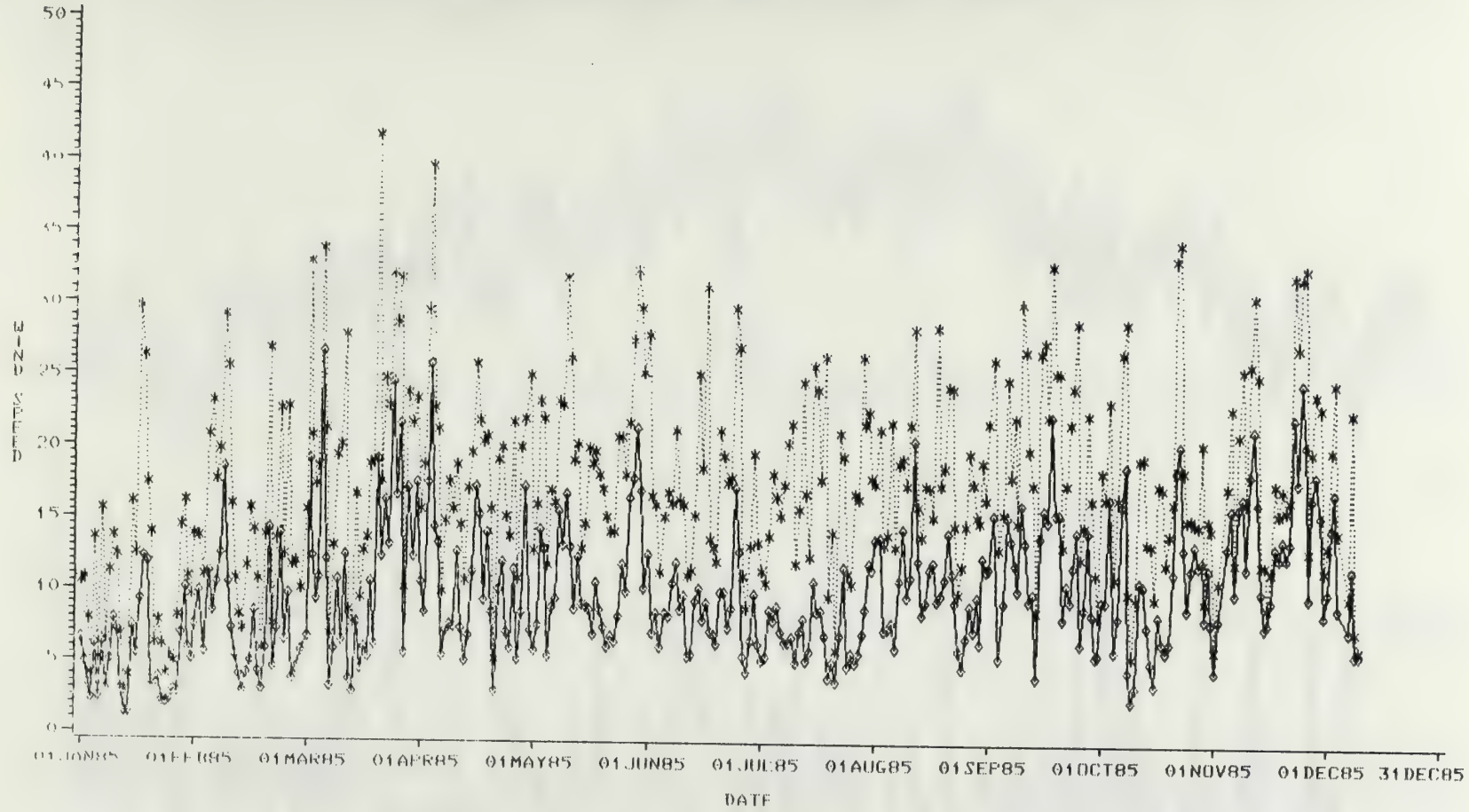
RIO BLANCO OIL SHALE COMPANY
AIR QUALITY AND METEOROLOGY MONITORING PROGRAM
WIND SPEED (10 METER TOWER) – SITE 1



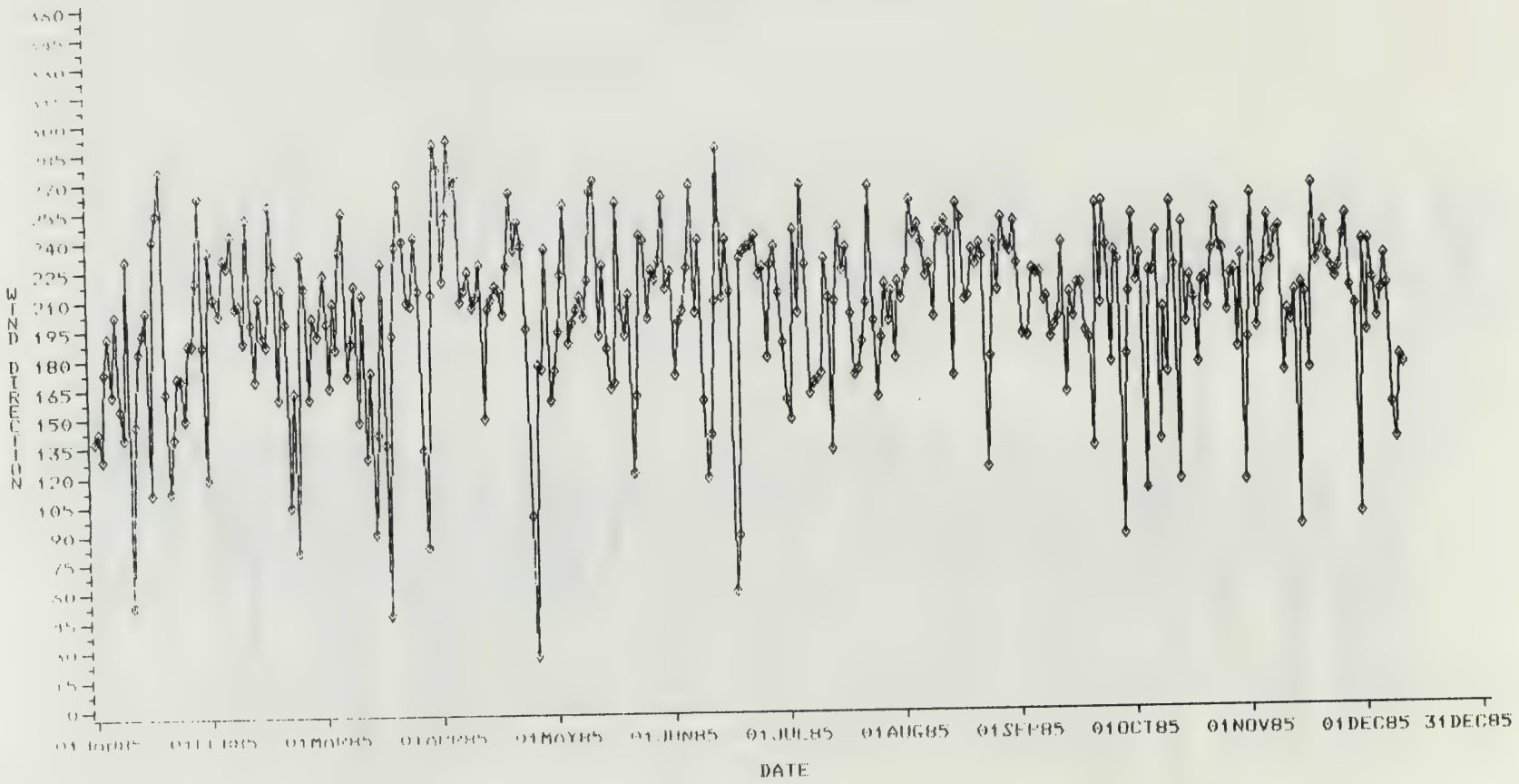
RIO BLANCO OIL SHALE COMPANY
AIR QUALITY AND METEOROLOGY MONITORING PROGRAM
WIND DIRECTION (10 METER TOWER) – SITE 1



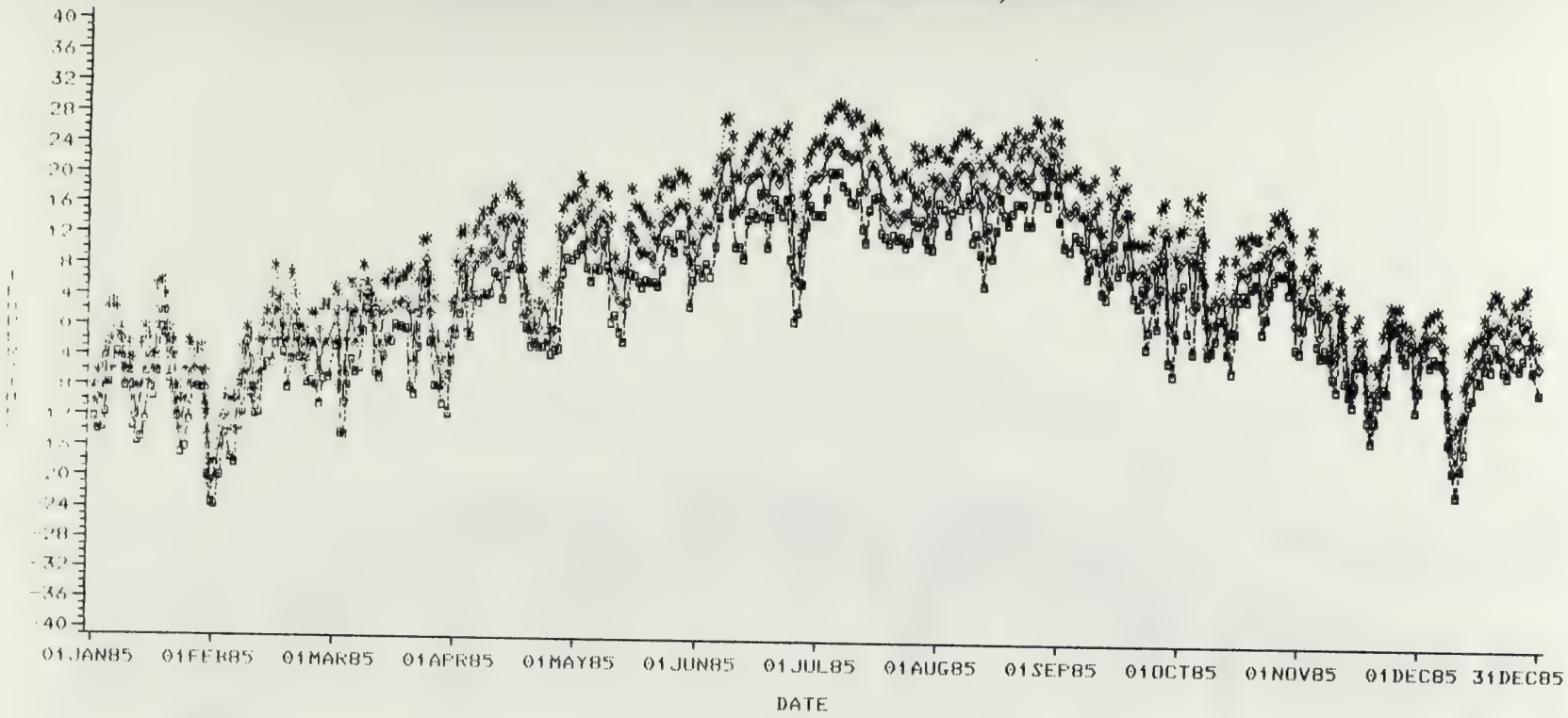
RIO BLANCO OIL SHALE COMPANY
AIR QUALITY AND METEOROLOGY MONITORING PROGRAM
WIND SPEED (60 METER TOWER) – SITE 1



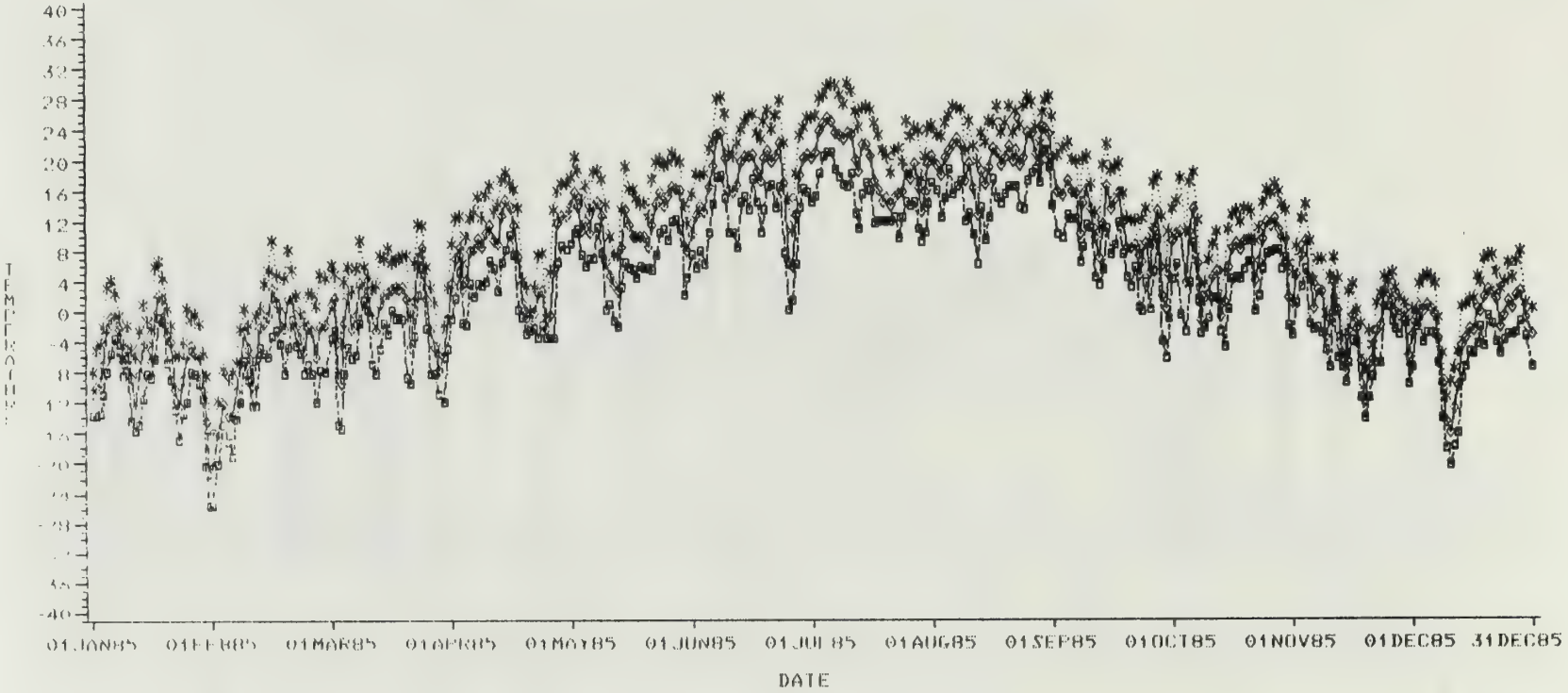
RIO BLANCO OIL SHALE COMPANY
AIR QUALITY AND METEOROLOGY MONITORING PROGRAM
WIND DIRECTION (60 METER TOWER) – SITE 1



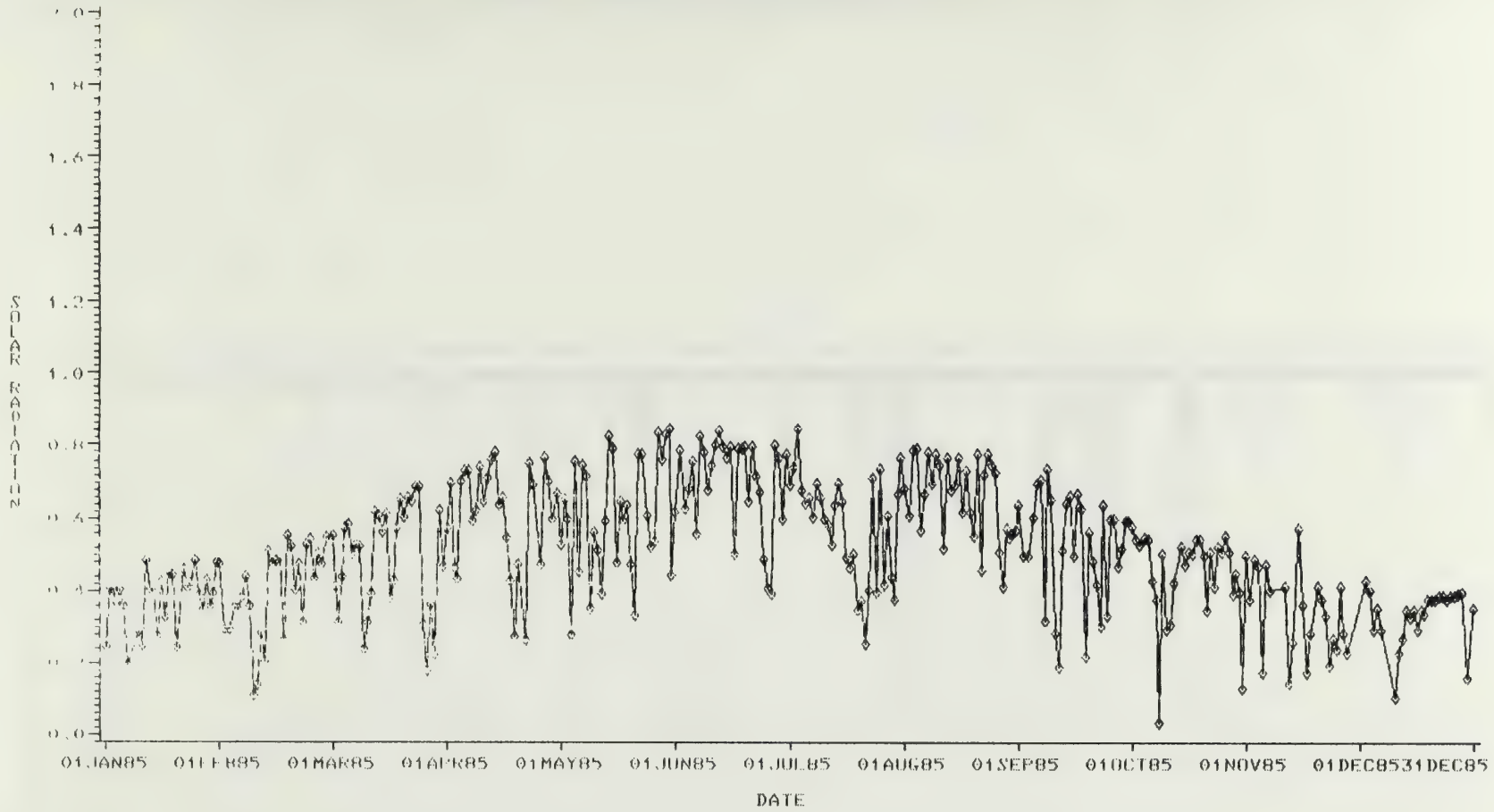
RIO BLANCO OIL SHALE COMPANY
AIR QUALITY AND METEOROLOGY MONITORING PROGRAM
AIR TEMPERATURE (10 METER TOWER) – SITE 1



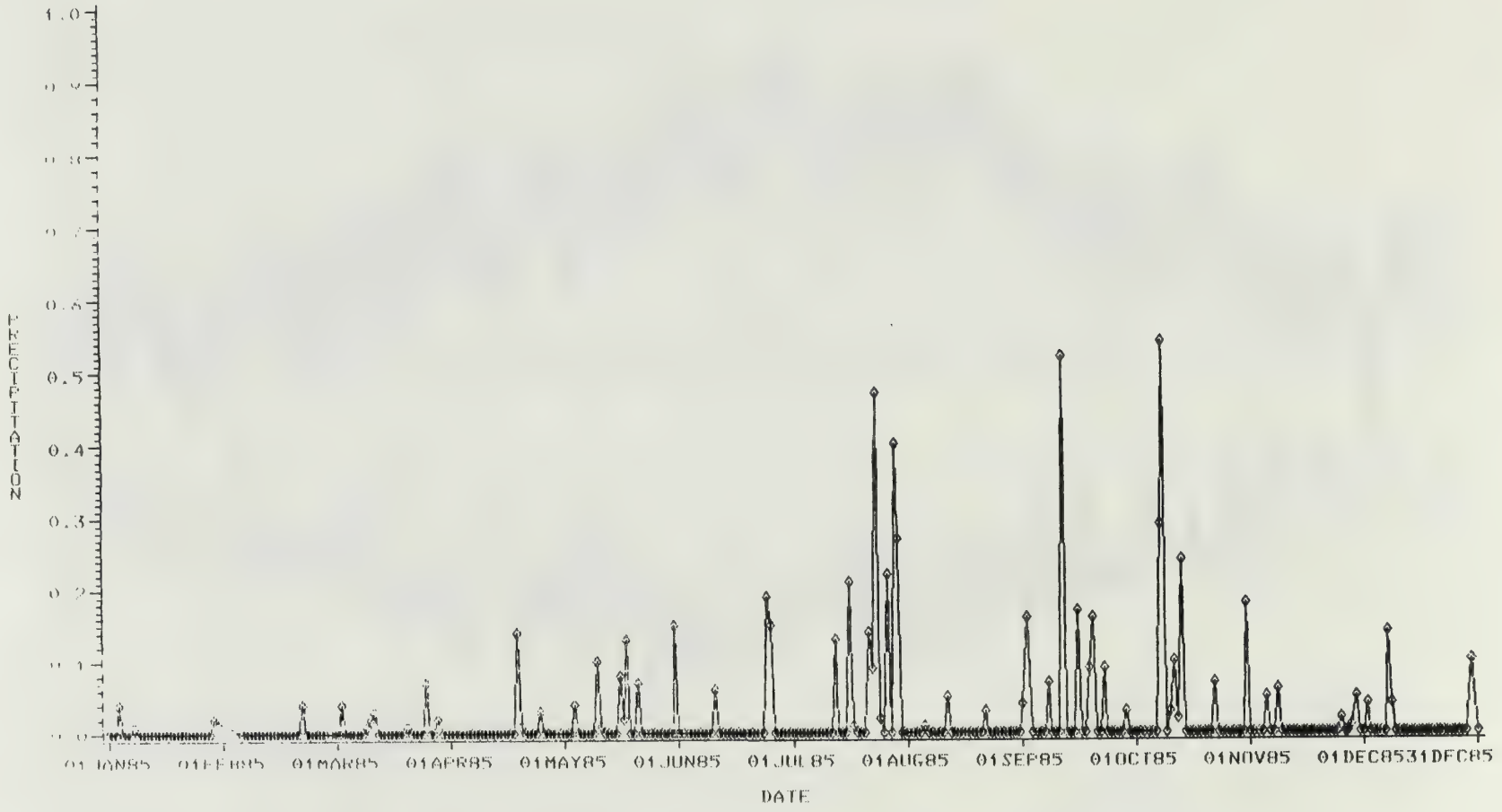
RIO BLANCO OIL SHALE COMPANY
AIR QUALITY AND METEOROLOGY MONITORING PROGRAM
AIR TEMPERATURE (60 METER TOWER) – SITE 1



RIO BLANCO OIL SHALE COMPANY
AIR QUALITY AND METEOROLOGY MONITORING PROGRAM
SOLAR RADIATION MEASURED AT SITE 1



RIO BLANCO OIL SHALE COMPANY
AIR QUALITY AND METEOROLOGY MONITORING PROGRAM
PRECIPITATION MEASURED AT SITE 1



APPENDIX 2-1.2

Precipitation Data

APPENDIX 2-1.2

RBOSC Site 1 Precipitation Data (inches)
1985

Date	Weather Measure Tipping Bucket Gauge	Belfort Weighing Bucket Gauge	Wedge Gauge
1/1	0.00	0.06	0.08
1/8-1/11	0.01	0.43	0.40
1/21-1/22	0.00	0.22	0.42
1/28-1/30	0.00	0.14	0.15
2/3	0.00	0.06	0.05
2/10	0.00	0.17	0.00
2/13	0.00	0.01	0.00
2/17	0.00	0.01	0.01
2/21-2/22	0.04	0.17	0.17
3/3-3/4	0.04	0.15	0.25
3/10-3/12	0.06	0.46	0.56
3/26-3/29	0.07	0.65	0.64
3/31	0.00	0.04	0.03
4/18-4/22	0.20	1.28	1.22
4/24-4/25	0.03	0.30	0.21
5/4	0.04	0.10	0.12
5/10-5/11	0.11	0.32	0.39
5/16-5/18	0.23	0.30	0.29
5/21	0.07	0.15	0.13
5/31	0.15	0.23	0.25
6/10	0.06	0.06	0.06
6/24-6/25	0.34	0.70	0.68
7/10-7/12	0.13	0.14	0.11
7/16-7/17	0.22	0.47	0.40
7/19-7/24	1.65	2.58	1.63
7/26	0.22	0.40	0.19
7/28-7/29	0.67	0.68	0.88
8/5	0.01	0.02	0.02
8/11	0.06	0.10	0.09
8/21	0.03	0.05	0.05

APPENDIX 2-1.2 (continued)

RBOSC Site 1 Precipitation Data (inches)
1985

Date	Weather Measure Tipping Bucket Gauge	Belfort Weighing Bucket Gauge	Wedge Gauge
9/1-9/2	0.20	0.27	0.37
9/7	0.07	0.08	0.08
9/11	0.52	0.55	0.53
9/15	0.17	0.16	0.18
9/18-9/19	0.25	0.25	0.31
9/21-9/22	0.09	0.22	0.16
9/28	0.03	0.05	0.05
10/7-10/8	0.83	1.05	1.01
10/10-10/13	0.39	0.55	0.88
10/22	0.07	0.07	0.06
10/31	0.18	0.34	0.38
11/5	0.05	0.07	0.09
11/11-11/12	0.06	0.93	0.95
11/15	0.00	0.06	0.07
11/18-11/19	0.00	0.44	0.44
11/28-11/29	0.08	0.00	0.02
12/2	0.04	0.95	1.14
12/8-12/9	0.23	0.27	0.46
12/11	0.00	0.05	0.05
12/30	0.10	0.10	0.12
Monthly Totals			
January	0.01	0.85	1.05
February	0.04	0.42	0.23
March	0.17	1.30	1.48
April	0.23	1.58	1.43
May	0.60	1.10	1.18
June	0.40	0.76	0.74
July	2.89	4.27	3.21
August	0.10	0.17	0.16
September	1.33	1.58	1.68
October	1.47	2.01	2.33
November	0.19	1.50	1.57
December	0.37	1.37	1.77
Annual Total	7.80	16.91	16.83

APPENDIX 2-1.3

Snow Depth Data

APPENDIX 2-1.3

Snow Depth Measurements (inches)
Site 1
January - December 1985

Date	Snow Depth	Date	Snow Depth	Date	Snow Depth
1/01	11.0	2/01	17.0	3/01	15.0
1/04	10.5	2/04	17.5	3/05	17.5
1/06	10.0	2/05	17.0	3/06	17.0
1/07	10.5	2/06	16.0	3/08	16.0
1/08	13.0	2/07	15.5	3/11	11.5
1/09	13.5	2/08	15.5	3/12	10.5
1/11	14.0	2/12	18.0	3/13	10.5
1/15	13.0	2/13	18.0	3/14	10.5
1/16	12.5	2/14	17.0	3/15	10.0
1/17	12.0	2/15	16.5	3/17	8.5
1/18	12.0	2/17	16.0	3/18	6.0
1/19	11.0	2/18	16.0	3/19	5.0
1/20	11.0	2/19	15.5	3/20	patchy
1/21	14.0	2/20	15.0	3/25	0.0
1/22	17.0	2/21	16.5	3/28	2.0
1/29	17.5	2/22	16.0	3/29	2.5
1/30	17.5	2/25	16.0	3/31	1.5
1/31	17.0	2/26	16.5		
		2/27	16.0		
		2/28	15.5		

Days are listed only when measurements were taken.

APPENDIX 2-1.3 (continued)

Snow Depth Measurements (inches)
Site 1
January - December 1985

Date	Snow Depth	Date	Snow Depth	Date	Snow Depth
4/01	2.0			11/11	5.0
4/02	patchy	no snow cover measured before 10/9/85		11/12	5.5
4/03	patchy			11/16	4.5
4/04	patchy			11/19	9.0
4/19	0.5	10/09	19.0	11/20	9.0
4/22	trace	10/10	9.5	11/21	9.5
		10/14	2.5	11/22	8.0
no snow cover measured after 4/22/85		10/15	1.0	11/27	6.0
		10/31	1.0		
				12/03	17.5
				12/05	16.0
				12/10	17.0
				12/11	18.0
				12/12	18.0
				12/20	16.5
				12/29	14.0

Days are listed only when measurements were taken.

APPENDIX 2-1.4

Barometric Pressure Data

APPENDIX 2-1.4

Barometric Pressure (mm Hg)
Site 1
January - December 1985

Date	Barometric Pressure	Date	Barometric Pressure	Date	Barometric Pressure
1/01	585.7	2/01	573.5	3/01	579.8
1/02	587.6	2/03	573.4	3/04	579.2
1/03	591.9	2/04	575.6	3/05	582.0
1/04	591.7	2/05	576.7	3/08	587.8
1/06	586.8	2/06	578.8	3/11	582.9
1/07	582.7	2/07	582.3	3/12	581.0
1/08	579.1	2/08	577.0	3/13	585.6
1/09	580.8	2/12	586.3	3/14	583.7
1/11	586.5	2/13	588.6	3/15	581.5
1/15	584.3	2/14	584.8	3/17	586.7
1/16	584.8	2/15	582.3	3/18	582.0
1/17	583.3	2/17	584.5	3/19	579.7
1/18	582.9	2/18	585.3	3/20	583.3
1/20	582.6	2/19	585.7	3/25	576.3
1/21	585.7	2/20	573.1	3/26	576.8
1/22	583.6	2/21	580.3	3/28	573.5
1/23	583.5	2/22	579.7	3/29	574.1
1/24	582.7	2/25	581.4	3/31	582.1
1/25	586.1	2/26	584.3		
1/29	575.7	2/27	584.6		
1/30	574.4	2/28	582.8		
1/31	574.9				

Days are listed only when measurements were taken.

APPENDIX 2-1.4 (continued)

Barometric Pressure (mm Hg)
Site 1
January - December 1985

Date	Barometric Pressure	Date	Barometric Pressure	Date	Barometric Pressure
4/01	589.5	5/03	584.7	6/04	584.7
4/02	590.3	5/07	585.4	6/05	585.2
4/03	582.9	5/08	586.0	6/06	589.6
4/04	574.5	5/09	585.6	6/07	583.7
4/09	585.1	5/10	574.7	6/09	585.2
4/10	584.6	5/12	580.1	6/10	586.1
4/12	589.2	5/16	587.5	6/11	588.9
4/14	587.3	5/19	582.5	6/12	587.9
4/15	583.4	5/23	588.0	6/13	585.9
4/16	583.7	5/24	587.4	6/14	585.8
4/17	581.3	5/26	583.6	6/17	588.2
4/19	575.4	5/27	582.2	6/18	589.5
4/22	576.3	5/28	584.1	6/19	585.9
4/23	586.0	5/29	580.3	6/20	585.3
4/24	582.4	5/30	596.1	6/21	584.6
4/26	579.2			6/24	583.4
4/28	583.7			6/25	580.9
4/29	585.7			6/26	588.4
4/30	588.0			6/28	589.5

Days are listed only when measurements were taken.

APPENDIX 2-1.4 (continued)

Barometric Pressure (mm Hg)
Site 1
January - December 1985

Date	Barometric Pressure	Date	Barometric Pressure	Date	Barometric Pressure
7/01	589.6	8/02	586.5	9/02	584.4
7/02	592.2	8/06	588.8	9/03	584.9
7/03	589.6	8/07	588.3	9/04	584.1
7/06	588.6	8/08	585.0	9/09	584.8
7/08	592.4	8/10	586.3	9/12	588.6
7/09	590.4	8/12	586.9	9/14	589.6
7/10	590.8	8/13	583.4	9/17	584.1
7/11	590.6	8/14	585.3	9/18	582.8
7/13	587.5	8/15	584.2	9/19	586.4
7/15	586.7	8/16	583.2	9/23	585.8
7/16	586.4	8/19	586.8	9/24	586.1
7/17	586.1	8/20	587.0	9/25	587.0
7/18	587.1	8/22	587.7	9/28	580.4
7/23	583.8	8/27	590.7		
7/24	586.9	8/28	591.0		
7/25	590.2	8/29	589.5		
7/27	587.7				
7/30	585.6				
7/31	586.3				

Days are listed only when measurements were taken.

APPENDIX 2-1.4 (continued)

Barometric Pressure (mm Hg)
Site 1
January - December 1985

Date	Barometric Pressure	Date	Barometric Pressure	Date	Barometric Pressure
10/02	583.9	11/04	584.0	12/03	583.9
10/07	572.0	11/05	584.7	12/05	587.1
10/08	577.6	11/06	585.8	12/10	583.4
10/09	582.1	11/11	583.4	12/11	584.7
10/10	586.2	11/12	580.5	12/12	581.8
10/14	588.6	11/14	586.0	12/17	592.4
10/15	588.4	11/16	582.6	12/18	590.6
10/17	590.0	11/19	585.0	12/19	589.4
10/21	578.9	11/20	581.8	12/20	588.8
10/22	584.3	11/21	577.7	12/24	581.8
10/23	585.7	11/22	575.7	12/25	583.4
10/26	586.0	11/27	579.8	12/26	583.9
10/29	582.4			12/28	579.8
10/30	583.9			12/29	585.0
10/31	578.2			12/30	582.6
				12/31	584.7

Days are listed only when measurements were taken.

APPENDIX 2-2

Visibility Data

APPENDIX 2-2

Hourly Visual Range Data (miles)
Spring 1985, Piceance Creek Basin, Colorado

Date	View	Time							Mean	Daily Mean
		0830	0930	1030	1130	1300	1400	1500		
5/09	I	100	105	122	123	131	116	124	117	
	II	85	90	125	125	132	119	127	115	
	III	107	138	141	117	151	126	128	130	
	IV	122	199	209	160	140	105	140	154	129
5/13	I	90	82	103	--	131	98	100	101	
	II	80	74	81	52	92	102	95	82	
	III	82	74	55	78	120	103	118	90	
	IV	81	55	69	59	51	96	--	69	85
5/17	I	98	87	84	92	68	85	--	86	
	II	100	86	85	84	91	80	99	89	
	III	117	105	115	115	112	73	70	101	
	IV	160	131	121	140	132	74	103	123	100
5/21	I	114	87	90	91	93	--	--	95	
	II	101	82	68	88	95	--	--	87	
	III	98	86	84	56	60	--	--	77	
	IV	55	50	101	50	71	--	--	65	81
5/29	I	111	108	107	105	99	91	93	102	
	II	104	96	96	94	86	92	89	94	
	III	115	102	97	98	84	77	83	94	
	IV	121	102	131	120	95	106	78	108	99

APPENDIX 2-2 (continued)

Hourly Visual Range Data (miles)
Spring 1985, Piceance Creek Basin, Colorado

Date	View	Time							Mean	Daily Mean
		0830	0930	1030	1130	1300	1400	1500		
6/06	I	82	91	91	105	96	102	110	97	
	II	87	83	77	90	97	105	78	88	
	III	77	87	94	117	89	138	105	101	
	IV	98	86	106	160	118	148	78	113	100
6/14	I	78	82	80	77	73	91	80	80	
	II	74	68	71	71	63	63	71	69	
	III	94	76	76	72	69	79	65	76	
	IV	95	100	92	87	75	63	89	86	78
6/18	I	71	71	66	66	70	75	80	71	
	II	75	68	66	63	66	68	71	68	
	III	83	75	66	66	67	72	71	71	
	IV	104	94	84	81	82	99	86	90	75
7/4	I	68	59	70	71	73	78	70	70	
	II	67	62	64	64	63	74	58	65	
	III	76	67	69	68	67	73	74	71	
	IV	93	92	86	89	78	76	79	85	72
7/8	I	54	48	46	53	44	43	40	47	
	II	47	43	42	38	37	40	38	41	
	III	52	38	40	42	40	37	42	42	
	IV	65	56	49	46	43	45	44	50	45

APPENDIX 5-O

1985 Hydrology Studies

APPENDIX 5-1.1

1985 Retort Abandonment On-Site Data Listing

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=ALUV STATION LOCATION=GS-S28AD

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1	08JAN85	2300	6.8	7.6	.	.	.	.	.	.	.	.	.	5.3
2	10MAY85	2366	7.5	7.8	.	-1.0	.	.	3	.	.	.	.	4.6
3	22MAY85	2255	7.6	7.8	.	-1.0	.	.	2	.	.	.	.	4.4
4	29MAY85	.	.	.	.	.	.	.	.	.	.	.	.	4.4
5	05JUN85	.	.	.	.	.	.	.	.	.	.	.	.	4.4
6	14JUN85	2426	8.8	7.7	.	-0.1	.	.	5	.	.	.	.	4.4

STATION TYPE=ALUV STATION LOCATION=GS-S28D

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
7	08JAN85	2700	7.9	7.5	.	.	.	.	.	.	.	.	.	7.8
8	10MAY85	2691	7.3	7.8	.	-1.0	.	.	3	.	.	.	.	7.3
9	22MAY85	2614	8.1	7.8	.	-1.0	.	.	2	.	.	.	.	7.0
10	29MAY85	.	.	.	.	.	.	.	.	.	.	.	.	7.0
11	05JUN85	.	.	.	.	.	.	.	.	.	.	.	.	7.0
12	14JUN85	2586	8.1	7.7	.	-0.1	.	.	3	.	.	.	.	7.0

STATION TYPE=ALUV STATION LOCATION=GS-S28S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
13	08JAN85	2450	7.9	7.3	.	.	.	.	.	.	.	.	.	7.6
14	10MAY85	2423	7.4	7.6	.	-1.0	.	.	1	.	.	.	.	6.7
15	22MAY85	2358	7.0	7.5	.	1.3	.	.	1	.	.	.	.	6.1
16	29MAY85	.	.	.	.	.	.	.	.	.	.	.	.	6.5
17	05JUN85	.	.	.	.	.	.	.	.	.	.	.	.	6.5
18	14JUN85	2447	8.4	7.5	.	1.7	.	.	3	.	.	.	.	6.5

STATION TYPE=ALUV STATION LOCATION=GS-S29AD

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
19	10MAY85	2366	7.5	8.1	.	-1.0	.	.	3	.	.	.	.	7.4
20	22MAY85	2306	7.0	8.0	.	-1.0	.	.	2	.	.	.	.	6.9
21	29MAY85	.	.	.	.	.	.	.	.	.	.	.	.	7.9
22	05JUN85	.	.	.	.	.	.	.	.	.	.	.	.	7.4
23	14JUN85	2356	7.0	8.0	.	-0.1	.	.	3	.	.	.	.	7.5

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=ALUV STATION LOCATION=GS-S29AS

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
24	10MAY85	2758	7.1	7.6	.	-1.0	.	.	3	.	.	.	.	8.1
25	22MAY85	2768	8.4	7.7	.	-1.0	.	.	2	.	.	.	.	7.2
26	29MAY85	.	.	.	.	.	.	.	.	.	.	.	.	7.3
27	05JUN85	.	.	.	.	.	.	.	.	.	.	.	.	8.0
28	14JUN85	2911	7.6	7.7	.	-0.1	.	.	3	.	.	.	.	8.0

STATION TYPE=ALUV STATION LOCATION=GS-S29D

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
29	10MAY85	4419	5.5	7.7	.	-1.0	.	.	3	.	.	.	.	6.3
30	22MAY85	4510	6.0	7.8	.	-1.0	.	.	2	.	.	.	.	6.2
31	29MAY85	.	.	.	.	.	.	.	.	.	.	.	.	6.3
32	05JUN85	.	.	.	.	.	.	.	.	.	.	.	.	6.4
33	14JUN85	2986	6.4	7.7	.	-0.1	.	.	2	.	.	.	.	6.5

STATION TYPE=ALUV STATION LOCATION=GS-S29S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
34	10MAY85	3685	5.9	7.7	.	-1.0	.	.	4	.	.	.	.	6.9
35	22MAY85	2983	5.9	7.7	.	-1.0	.	.	3	.	.	.	.	6.6
36	29MAY85	.	.	.	.	.	.	.	.	.	.	.	.	6.6
37	05JUN85	.	.	.	.	.	.	.	.	.	.	.	.	6.7
38	14JUN85	4120	6.2	7.5	.	-0.1	.	.	3	.	.	.	.	6.8

STATION TYPE=DAMS STATION LOCATION=MINEDIS-1

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
39	17MAY85	2125	.	7.8	380	-1	1.2	-1	2	-0.1	12	.	.	.

STATION TYPE=DAMS STATION LOCATION=MINEDIS-2

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
40	16MAY85	2048	.	7.7	328	-1.0	1.3	-1	2	-0.1	18	.	.	.
41	17MAY85	2100	.	7.6	360	-1.0	1.1	-1	1	-0.1	15	.	.	.
42	18MAY85	2367	16.0	7.5	.	-1.0	.	.	10	.	.	.	.	.
43	19MAY85	2417	16.0	7.5	430	-1.0	1.2	-1	2	0.1	.	.	.	.
44	20MAY85	2418	16.0	7.5	.	-1.0	.	.	1	.	.	.	.	.
45	21MAY85	2428	15.0	7.5	.	1.2	.	.	1	.	.	.	.	.
46	22MAY85	2358	15.5	7.6	440	1.2	1.1	-1	1	-0.1	18	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=DAMS STATION LOCATION=MINEDIS-2

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
47	23MAY85	2286	15.5	7.4	.	-1	.	.	1	.	.	.	.	.
48	24MAY85	2336	16.0	7.5	.	-1	.	.	-1	.	.	.	.	.
49	25MAY85	2346	17.0	7.3	.	-1	.	.	-1	.	.	.	.	.
50	26MAY85	2346	17.2	7.6	.	-1	.	.	-1	.	.	.	.	.
51	27MAY85	2211	15.5	7.5	.	1	.	.	1	.	.	.	.	.
52	28MAY85	2153	16.0	7.6	.	1	.	.	-1	.	.	.	.	.
53	29MAY85	2135	16.0	7.5	460	-1	1.1	-1	-1	-0.1	15	.	.	.
54	30MAY85	2126	14.0	7.6	.	-1	.	.	-1	.	.	.	.	.
55	31MAY85	2088	15.0	7.6	.	-1	.	.	-1	.	.	.	.	.
56	01JUN85	.	.	.	.	.	.	.	.	.	.	.	.	.

STATION TYPE=DAMS STATION LOCATION=MINEDIS-3

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
57	25MAY85	2448	.	7.8	.	-1	.	.	9	.	.	.	.	.

STATION TYPE=DAMS STATION LOCATION=YBOXFL

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
58	03JAN85	1600	8.0	7.6	.	.	.	.	.	.	.	.	.	.
59	09JAN85	1550	8.7	7.5	.	.	.	.	.	.	.	.	318.6	.
60	16JAN85	1550	9.3	7.5	.	.	.	.	.	.	.	.	359.0	.
61	23JAN85	1550	8.2	7.5	.	.	.	.	.	.	.	.	327.6	.
62	31JAN85	1500	8.0	7.5	.	.	.	.	.	.	.	.	318.6	.
63	06FEB85	1550	8.7	7.4	.	.	.	.	.	.	.	.	327.6	.
64	13FEB85	1550	10.0	7.5	.	.	.	.	.	.	.	.	327.6	.
65	20FEB85	1500	10.5	7.6	.	.	.	.	.	.	.	.	327.6	.
66	27FEB85	1575	9.5	7.6	.	.	.	.	.	.	.	.	327.6	.
67	06MAR85	1575	8.1	7.6	.	.	.	.	.	.	.	.	327.6	.
68	13MAR85	1500	10.8	7.5	.	.	.	.	.	.	.	.	.	.
69	20MAR85	1450	9.7	7.5	.	.	.	.	.	.	.	.	.	.
70	28MAR85	1525	8.2	7.5	.	.	.	.	.	.	.	.	.	.
71	14MAY85	1277	5.4	8.0	.	-1.0	.	.	1	.	.	.	6270.0	.
72	21MAY85	1306	13.6	7.3	.	-1.0	.	.	1	.	.	.	4564.0	.
73	24MAY85	1326	12.4	7.9	.	-1.0	.	.	-1	.	.	.	.	.
74	29MAY85	1348	9.5	7.9	.	-1.0	.	.	-1	.	.	.	3453.0	.
75	30MAY85	.	.	.	.	.	.	.	.	.	.	.	3604.0	.
76	31MAY85	1359	8.0	8.0	.	-1.0	.	.	-1	.	.	.	.	.
77	04JUN85	1331	13.0	7.9	.	-0.1	.	.	-1	.	.	.	2858.0	.
78	07JUN85	1400	13.4	8.0	.	-0.1	.	.	3	.	.	.	2991.0	.
79	13JUN85	1420	18.0	7.9	.	-0.1	.	.	1	.	.	.	2272.0	.
80	19JUN85	1401	19.9	8.0	.	-0.1	.	.	3	.	.	.	1454.0	.
81	26JUN85	1533	11.2	8.0	.	-0.1	.	.	1	.	.	.	1378.0	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=DAMS STATION LOCATION=YBOXFL

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
82	02JUL85	1318	18.5	7.9	.	-0.1	.	.	-1	.	.	.	934	.
83	09JUL85	1502	16.8	7.9	.	-0.1	.	.	-1	.	.	.	808	.
84	17JUL85	1487	11.5	8.0	.	-0.1	.	.	-1	.	.	.	889	.
85	24JUL85	1582	13.8	8.1	.	-0.1	.	.	-1	.	.	.	889	.
86	31JUL85	1606	18.0	7.7	.	-0.1	.	.	-1	.	.	.	844	.
87	07AUG85	1530	19.0	7.7	.	-0.1	.	.	-1	.	.	.	745	.
88	14AUG85	1563	17.1	7.8	.	-1.0	.	.	-1	.	.	.	727	.
89	22AUG85	1471	12.9	7.6	.	-0.1	.	.	-1	.	.	.	664	.
90	28AUG85	1488	16.7	7.8	.	-0.1	.	.	-1	.	.	.	588	.
91	04SEP85	1720	12.5	7.9	.	-0.1	.	.	2	.	.	.	646	.
92	11SEP85	1650	9.5	7.8	.	-0.1	.	.	-1	.	.	.	624	.
93	17SEP85	1350	12.7	7.9	.	-0.1	.	.	-1	.	.	.	624	.
94	28SEP85	1500	16.9	7.7	.	-0.1	.	.	-1	.	.	.	624	.
95	06NOV85	1616	8.7	8.0	.	-0.1	0.6	.	2	.	.	.	516	.
96	17DEC85	1538	7.8	7.7	.	-0.1	.	.	1	.	.	.	426	.

STATION TYPE=DAMS STATION LOCATION=YCOFL

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
97	03JAN85	1850	3.2	7.7	.	.	.	.	.	.	.	.	53.9	.
98	09JAN85	1850	4.7	7.7	.	.	.	.	.	.	.	.	44.9	.
99	16JAN85	1850	3.9	7.7	.	.	.	.	.	.	.	.	44.9	.
100	23JAN85	1800	3.0	7.7	.	.	.	.	.	.	.	.	40.4	.
101	31JAN85	1800	1.7	7.7	.	.	.	.	.	.	.	.	.	.
102	06FEB85	1800	3.1	7.6	.	.	.	.	.	.	.	.	.	.
103	13FEB85	1800	5.6	7.6	.	.	.	.	.	.	.	.	22.4	.
104	20FEB85	1750	8.5	7.7	.	.	.	.	.	.	.	.	31.4	.
105	27FEB85	1800	6.6	7.8	.	.	.	.	.	.	.	.	22.4	.
106	06MAR85	1800	4.9	7.7	.	.	.	.	.	.	.	.	18.0	.
107	13MAR85	1150	8.3	7.7	.	.	.	.	.	.	.	.	.	.
108	20MAR85	1050	3.6	7.8	.	.	.	.	.	.	.	.	.	.
109	28MAR85	1650	4.5	7.7	.	.	.	.	.	.	.	.	.	.
110	14MAY85	1490	6.2	8.0	.	-1.0	.	.	2	.	.	.	3299.0	.
111	21MAY85	1846	16.5	8.0	.	-1.0	.	.	2	.	.	.	4421.0	.
112	24MAY85	1683	15.8	7.9	.	-1.0	.	.	1	.	.	.	.	.
113	29MAY85	1749	13.0	7.9	.	-1.0	.	.	1	.	.	.	4512.0	.
114	30MAY85	.	.	.	.	.	.	.	.	.	.	.	3770.0	.
115	31MAY85	1738	9.5	8.0	.	-1.0	.	.	-1	.	.	.	.	.
116	04JUN85	1613	16.8	8.0	.	-0.1	.	.	1	.	.	.	2048.0	.
117	07JUN85	1610	18.1	8.1	.	-0.1	.	.	5	.	.	.	1621.0	.
118	13JUN85	1591	20.8	8.0	.	-0.1	.	.	1	.	.	.	1432.0	.
119	19JUN85	1512	22.3	8.1	.	-0.1	.	.	1	.	.	.	907.0	.
120	26JUN85	1878	12.3	8.0	.	0.1	.	.	17	.	.	.	871.0	.
121	02JUL85	1700	21.4	8.1	.	-0.1	.	.	1	.	.	.	664.0	.
122	09JUL85	2756	19.8	8.0	.	-0.1	.	.	-1	.	.	.	494.0	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=DAMS STATION LOCATION=YCOFL

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
123	17JUL85	1679	12.8	8.1	.	-0.1	.	.	-1	.	.	.	1019	.
124	24JUL85	1775	17.1	8.2	.	-0.1	.	.	2	.	.	.	.	.
125	31JUL85	1906	21.6	8.0	.	-0.1	.	.	1	.	.	.	287	.
126	07AUG85	1903	21.7	8.0	.	-0.1	.	.	-1	.	.	.	157	.
127	14AUG85	1940	20.3	7.8	.	-1.0	.	.	-1	.	.	.	175	.
128	22AUG85	1911	16.0	8.0	.	-0.1	.	.	-1	.	.	.	157	.
129	28AUG85	2000	20.4	8.0	.	-0.1	.	.	-1	.	.	.	67	.
130	04SEP85	1913	16.0	8.0	.	-0.1	.	.	-1	.	.	.	144	.
131	11SEP85	1770	9.5	7.8	.	-0.1	.	.	-1	.	.	.	184	.
132	17SEP85	1780	15.5	7.9	.	-0.1	.	.	-1	.	.	.	175	.
133	28SEP85	1850	17.9	7.8	.	-0.1	.	.	-1	.	.	.	117	.

STATION TYPE=DAMS STATION LOCATION=YCOINJ

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
134	15MAY85	2569	.	7.3	448	1.3	0.9	-1	2	-0.1	15	.	.	.
135	16MAY85	2040	.	7.9	316	-1.0	1.0	-1	14	-0.1	20	.	.	.
136	18MAY85	2284	16.0	7.4	.	-1.0	.	.	2	.	.	.	.	.
137	19MAY85	2377	16.0	7.7	.	-1.0	.	.	1	.	.	.	.	.
138	20MAY85	2470	17.0	7.4	.	-1.0	.	.	1	.	.	.	.	.
139	21MAY85	2423	16.0	7.7	.	1.2	.	.	1	.	.	.	.	.
140	22MAY85	2306	16.0	7.9	428	1.2	1.1	-1	1	-0.1	15	.	.	.
141	23MAY85	2337	15.5	7.1	.	-1.0	.	.	1	.	.	.	.	.
142	24MAY85	2346	16.0	7.2	.	1.0	.	.	1	.	.	.	.	.
143	25MAY85	2321	16.0	7.2	.	-1.0	.	.	-1	.	.	.	.	.
144	26MAY85	2264	16.1	7.2	.	-1.0	.	.	-1	.	.	.	.	.
145	27MAY85	2190	15.5	7.1	.	1.0	.	.	-1	.	.	.	.	.
146	28MAY85	2101	15.5	7.2	.	1.0	.	.	-1	.	.	.	.	.
147	29MAY85	2058	15.0	7.1	458	-1.0	1.2	-1	-1	-0.1	12	.	.	.
148	30MAY85	1942	15.0	7.2	.	-1.0	.	.	-1	.	.	.	.	.
149	31MAY85	2020	15.0	7.3	.	-1.0	.	.	-1	.	.	.	.	.
150	01JUN85	2042	15.0	7.2	.	-0.1	.	.	3	.	.	.	.	.

STATION TYPE=DAMS STATION LOCATION=YLOWYEL

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
151	10MAY85	2259	9.9	8.1	.	-1.0	.	.	4	.	.	.	.	.
152	22MAY85	2358	11.8	8.2	.	-1.0	.	.	2	.	.	.	.	.
153	29MAY85	1955	18.4	8.2	.	-1.0	.	.	2	.	.	.	.	.
154	05JUN85	2573	12.8	7.9	.	-0.1	.	.	2	.	.	.	.	.
155	14JUN85	2884	13.5	8.2	.	-0.1	.	.	3	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=DAMS STATION LOCATION=YMET3

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
156	03JAN85	1650	7.0	7.6	.	.	.	.	.	.	.	.	.	.
157	09JAN85	1600	7.7	7.6	.	.	.	.	.	.	.	.	363.5	.
158	16JAN85	1650	7.7	7.6	.	.	.	.	.	.	.	.	403.9	.
159	23JAN85	1600	7.3	7.6	.	.	.	.	.	.	.	.	368.0	.
160	31JAN85	1500	6.7	7.5	.	.	.	.	.	.	.	.	.	.
161	06FEB85	1600	7.7	7.5	.	.	.	.	.	.	.	.	.	.
162	13FEB85	1600	9.0	7.6	.	.	.	.	.	.	.	.	350.0	.
163	20FEB85	1500	10.2	7.6	.	.	.	.	.	.	.	.	359.0	.
164	27FEB85	1575	8.9	7.6	.	.	.	.	.	.	.	.	350.0	.
165	06MAR85	1575	7.4	7.6	.	.	.	.	.	.	.	.	345.6	.
166	13MAR85	1350	10.2	7.6	.	.	.	.	.	.	.	.	.	.
167	20MAR85	1100	5.2	7.6	.	.	.	.	.	.	.	.	.	.
168	28MAR85	1550	7.8	7.6	.	.	.	.	.	.	.	.	.	.
169	14MAY85	1383	5.7	8.1	.	-1.0	.	.	1	.	.	.	9569.0	.
170	21MAY85	1540	15.1	8.0	.	-1.0	.	.	1	.	.	.	8976.0	.
171	24MAY85	1479	13.7	7.2	.	-1.0	.	.	1	.	.	.	.	.
172	29MAY85	1492	11.5	7.9	.	-1.0	.	.	-1	.	.	.	7965.0	.
173	30MAY85	.	.	.	.	.	.	.	.	.	.	.	7374.0	.
174	31MAY85	1505	8.5	8.0	.	-1.0	.	.	-1	.	.	.	.	.
175	04JUN85	1386	14.8	8.0	.	-0.1	.	.	1	.	.	.	4906.0	.
176	07JUN85	1500	16.1	8.1	.	-0.1	.	.	1	.	.	.	4612.0	.
177	13JUN85	1509	20.0	8.0	.	-0.1	.	.	1	.	.	.	3704.0	.
178	19JUN85	1527	20.7	8.0	.	-0.1	.	.	1	.	.	.	2361.0	.
179	26JUN85	1654	11.7	8.1	.	-0.1	.	.	13	.	.	.	2249.0	.
180	02JUL85	1508	19.5	8.1	.	-0.1	.	.	2	.	.	.	1598.0	.
181	09JUL85	1592	17.7	8.0	.	-0.1	.	.	-1	.	.	.	1302.0	.
182	17JUL85	1627	12.3	8.2	.	-0.1	.	.	-1	.	.	.	1907.0	.
183	24JUL85	1741	15.7	8.1	.	-0.1	.	.	2	.	.	.	.	.
184	31JUL85	1707	19.1	7.9	.	-0.1	.	.	-1	.	.	.	1131.0	.
185	07AUG85	1639	19.5	7.9	.	-0.1	.	.	-1	.	.	.	902.0	.
186	14AUG85	1725	18.0	7.9	.	-1.0	.	.	-1	.	.	.	902.0	.
187	22AUG85	1498	13.5	7.7	.	-0.1	.	.	-1	.	.	.	821.0	.
188	28AUG85	1523	17.1	8.0	.	-0.1	.	.	-1	.	.	.	655.0	.
189	04SEP85	1710	14.0	7.9	.	-0.1	.	.	-1	.	.	.	790.0	.
190	11SEP85	1700	9.5	7.8	.	-0.1	.	.	-1	.	.	.	808.0	.
191	17SEP85	1530	13.5	7.9	.	-0.1	.	.	-1	.	.	.	799.0	.
192	28SEP85	1650	17.7	7.8	.	-0.1	.	.	-1	.	.	.	741.0	.
193	06NOV85	1706	8.8	8.0	.	-0.1	0.5	.	1	.	.	.	.	.
194	17DEC85	1599	6.8	7.7	.	-0.1	.	.	1	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=DAMS STATION LOCATION=YSEOFL

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
195	16JAN85	2200	8.0	7.6	.	.	.	.	.	.	.	.	534.1	.
196	13FEB85	2100	9.2	7.5	.	.	.	.	.	.	.	.	516.1	.
197	13MAR85	2000	10.7	7.6	.	.	.	.	.	.	.	.	.	.
198	14MAY85	1410	5.5	8.1	.	-1.0	.	.	2	.	.	.	9354.0	.
199	21MAY85	1581	14.3	8.0	.	-1.0	.	.	2	.	.	.	7154.0	.
200	29MAY85	1657	11.7	8.0	.	-1.0	.	.	1	.	.	.	5040.0	.
201	04JUN85	1613	12.3	7.9	.	-0.1	.	.	1	.	.	.	4484.0	.
202	13JUN85	1591	17.9	7.9	.	-0.1	.	.	1	.	.	.	3632.0	.
203	06NOV85	2033	8.4	8.0	.	-0.1	0.5	.	2	.	.	.	856.0	.

STATION TYPE=DAMS STATION LOCATION=YUPCO

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
204	06NOV85	1706	4.7	8.0	.	-0.1	0.4	.	1	.	.	.	.	.
205	17DEC85	1550	0.5	7.8	.	-0.1	.	.	1	.	.	.	.	.

STATION TYPE=DAMS STATION LOCATION=YVIOLET

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
206	10MAY85	1902	13.2	8.2	.	-1.0	.	.	3	.	.	.	.	.
207	14MAY85	.	.	.	.	.	.	.	.	.	.	.	12753	.
208	22MAY85	1845	15.7	8.1	.	-1.0	.	.	2	.	.	.	13554	.
209	29MAY85	2109	17.5	8.1	.	-1.0	.	.	2	.	.	.	10391	.
210	05JUN85	2171	16.0	8.1	.	-0.1	.	.	2	.	.	.	8511	.
211	14JUN85	2243	16.0	8.3	.	-0.1	.	.	2	.	.	.	7693	.

STATION TYPE=DAMS STATION LOCATION=YYELCR

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
212	10MAY85	2369	9.7	8.3	.	-1.0	.	.	4	.	.	.	.	.
213	22MAY85	2358	20.0	8.3	.	-1.0	.	.	2	.	.	.	.	.
214	30MAY85	2573	8.0	8.3	.	-1.0	.	.	2	.	.	.	.	.
215	05JUN85	2520	10.5	8.3	.	-0.1	.	.	2	.	.	.	.	.
216	13JUN85	2590	9.7	8.3	.	-0.1	.	.	2	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=DAMS STATION LOCATION=Y84RANCH

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
217	10MAY85	1590	13.6	8.1	.	-1.0	.	.	2	.	.	.	.	.
218	22MAY85	1732	19.0	8.0	.	-1.0	.	.	2	.	.	.	.	.
219	29MAY85	1749	12.2	8.0	.	-1.0	.	.	9	.	.	.	.	.
220	05JUN85	1749	18.3	8.0	.	-0.1	.	.	2	.	.	.	.	.
221	14JUN85	1846	18.7	8.2	.	-0.1	.	.	2	.	.	.	.	.

STATION TYPE=LOWA STATION LOCATION=CE-709L

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
222	15MAY85	.	.	.	.	.	.	.	.	.	.	6633.3	.	.
223	16MAY85	.	.	.	.	.	.	.	.	.	.	6632.4	.	.
224	17MAY85	.	.	.	.	.	.	.	.	.	.	6631.9	.	.
225	18MAY85	.	.	.	.	.	.	.	.	.	.	6631.6	.	.
226	19MAY85	.	.	.	.	.	.	.	.	.	.	6631.3	.	.
227	20MAY85	.	.	.	.	.	.	.	.	.	.	6628.8	.	.
228	21MAY85	.	.	.	.	.	.	.	.	.	.	6628.6	.	.
229	30MAY85	.	.	.	.	.	.	.	.	.	.	6629.3	.	.
230	01JUN85	.	.	.	.	.	.	.	.	.	.	6628.9	.	.
231	02JUN85	.	.	.	.	.	.	.	.	.	.	6629.0	.	.
232	03JUN85	.	.	.	.	.	.	.	.	.	.	6629.8	.	.
233	04JUN85	.	.	.	.	.	.	.	.	.	.	6630.0	.	.
234	05JUN85	.	.	.	.	.	.	.	.	.	.	6630.2	.	.
235	06JUN85	.	.	.	.	.	.	.	.	.	.	6630.2	.	.
236	07JUN85	.	.	.	.	.	.	.	.	.	.	6630.3	.	.
237	11JUN85	.	.	.	.	.	.	.	.	.	.	6630.4	.	.
238	17JUN85	.	.	.	.	.	.	.	.	.	.	6631.0	.	.
239	27JUL85	.	.	.	.	.	.	.	.	.	.	6634.2	.	.

STATION TYPE=LOWA STATION LOCATION=GS-17L

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
240	15MAY85	.	.	.	.	.	.	.	.	.	.	6632.2	.	.
241	16MAY85	.	.	.	.	.	.	.	.	.	.	6632.2	.	.
242	17MAY85	.	.	.	.	.	.	.	.	.	.	6632.2	.	.
243	18MAY85	.	.	.	.	.	.	.	.	.	.	6632.3	.	.
244	19MAY85	.	.	.	.	.	.	.	.	.	.	6632.1	.	.
245	20MAY85	.	.	.	.	.	.	.	.	.	.	6632.2	.	.
246	21MAY85	.	.	.	.	.	.	.	.	.	.	6632.0	.	.
247	30MAY85	.	.	.	.	.	.	.	.	.	.	6631.3	.	.
248	01JUN85	.	.	.	.	.	.	.	.	.	.	6631.4	.	.
249	02JUN85	.	.	.	.	.	.	.	.	.	.	6631.4	.	.
250	03JUN85	.	.	.	.	.	.	.	.	.	.	6631.3	.	.
251	04JUN85	.	.	.	.	.	.	.	.	.	.	6631.2	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=LOWA STATION LOCATION=GS-17L

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
252	05JUN85	.	.	.	.	.	.	.	.	.	.	6631.1	.	.
253	06JUN85	.	.	.	.	.	.	.	.	.	.	6631.1	.	.
254	07JUN85	.	.	.	.	.	.	.	.	.	.	6631.0	.	.
255	11JUN85	.	.	.	.	.	.	.	.	.	.	6631.1	.	.
256	17JUN85	.	.	.	.	.	.	.	.	.	.	6631.6	.	.
257	27JUL85	.	.	.	.	.	.	.	.	.	.	6633.3	.	.

STATION TYPE=LOWA STATION LOCATION=GS-18L

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
258	15MAY85	.	.	.	.	.	.	.	.	.	.	6619.0	.	.
259	16MAY85	.	.	.	.	.	.	.	.	.	.	6619.0	.	.
260	17MAY85	.	.	.	.	.	.	.	.	.	.	6619.0	.	.
261	18MAY85	.	.	.	.	.	.	.	.	.	.	6619.0	.	.
262	19MAY85	.	.	.	.	.	.	.	.	.	.	6619.1	.	.
263	20MAY85	.	.	.	.	.	.	.	.	.	.	6615.7	.	.
264	21MAY85	.	.	.	.	.	.	.	.	.	.	6615.6	.	.
265	30MAY85	.	.	.	.	.	.	.	.	.	.	6624.7	.	.
266	01JUN85	.	.	.	.	.	.	.	.	.	.	6623.3	.	.
267	02JUN85	.	.	.	.	.	.	.	.	.	.	6620.5	.	.
268	03JUN85	.	.	.	.	.	.	.	.	.	.	6620.1	.	.
269	04JUN85	.	.	.	.	.	.	.	.	.	.	6619.7	.	.
270	05JUN85	.	.	.	.	.	.	.	.	.	.	6619.4	.	.
271	06JUN85	.	.	.	.	.	.	.	.	.	.	6619.1	.	.
272	07JUN85	.	.	.	.	.	.	.	.	.	.	6619.0	.	.
273	11JUN85	.	.	.	.	.	.	.	.	.	.	6618.3	.	.
274	17JUN85	.	.	.	.	.	.	.	.	.	.	6618.1	.	.
275	26JUL85	.	.	.	.	.	.	.	.	.	.	6619.7	.	.

STATION TYPE=LOWA STATION LOCATION=GS-19L

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
276	15MAY85	.	.	.	.	.	.	.	.	.	.	6622.9	.	.
277	16MAY85	.	.	.	.	.	.	.	.	.	.	6622.9	.	.
278	17MAY85	.	.	.	.	.	.	.	.	.	.	6622.7	.	.
279	18MAY85	.	.	.	.	.	.	.	.	.	.	6622.5	.	.
280	19MAY85	.	.	.	.	.	.	.	.	.	.	6622.6	.	.
281	20MAY85	.	.	.	.	.	.	.	.	.	.	6620.3	.	.
282	21MAY85	.	.	.	.	.	.	.	.	.	.	6620.1	.	.
283	30MAY85	.	.	.	.	.	.	.	.	.	.	6620.1	.	.
284	01JUN85	.	.	.	.	.	.	.	.	.	.	6622.0	.	.
285	02JUN85	.	.	.	.	.	.	.	.	.	.	6621.9	.	.
286	03JUN85	.	.	.	.	.	.	.	.	.	.	6622.2	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=LOWA STATION LOCATION=GS-19L

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
287	04JUN85	.	.	.	.	.	.	.	.	.	.	6622.2	.	.
288	05JUN85	.	.	.	.	.	.	.	.	.	.	6622.2	.	.
289	06JUN85	.	.	.	.	.	.	.	.	.	.	6622.0	.	.
290	07JUN85	.	.	.	.	.	.	.	.	.	.	6622.0	.	.
291	11JUN85	.	.	.	.	.	.	.	.	.	.	6621.9	.	.
292	17JUN85	.	.	.	.	.	.	.	.	.	.	6622.1	.	.
293	26JUL85	.	.	.	.	.	.	.	.	.	.	6624.5	.	.

STATION TYPE=LOWA STATION LOCATION=GS-4-5L

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
294	19MAY85	.	.	.	.	.	.	.	.	.	.	6632.7	.	.
295	20MAY85	.	.	.	.	.	.	.	.	.	.	6627.3	.	.
296	21MAY85	.	.	.	.	.	.	.	.	.	.	6627.1	.	.
297	30MAY85	.	.	.	.	.	.	.	.	.	.	6629.5	.	.
298	01JUN85	.	.	.	.	.	.	.	.	.	.	6629.5	.	.
299	02JUN85	.	.	.	.	.	.	.	.	.	.	6629.1	.	.
300	03JUN85	.	.	.	.	.	.	.	.	.	.	6629.0	.	.
301	04JUN85	.	.	.	.	.	.	.	.	.	.	6629.0	.	.
302	05JUN85	.	.	.	.	.	.	.	.	.	.	6629.0	.	.
303	06JUN85	.	.	.	.	.	.	.	.	.	.	6628.9	.	.
304	07JUN85	.	.	.	.	.	.	.	.	.	.	6628.9	.	.
305	11JUN85	.	.	.	.	.	.	.	.	.	.	6629.0	.	.
306	17JUN85	.	.	.	.	.	.	.	.	.	.	6629.3	.	.
307	27JUL85	.	.	.	.	.	.	.	.	.	.	6632.1	.	.

STATION TYPE=POND STATION LOCATION=YERPOND

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
308	24APR85	5661	.	8.5	724	-1.0	10.0	-1	370	-0.1	140	.	.	.
309	14MAY85	6589	.	8.8	744	2.1	11.3	-1	430	-0.1	100	.	.	.
310	26JUN85	4381	.	8.2	.	0.4	.	-1	192	-0.1	98	.	.	.
311	24JUL85	4244	19	8.4	184	0.5	5.2	-1	310	-0.1	84	.	.	.
312	20AUG85	4084	15	8.4	200	0.4	4.0	-1	360	-0.1	62	.	.	.
313	24SEP85	4829	.	8.4	176	0.3	5.1	.	330	.	100	.	.	.
314	26OCT85	4908	.	8.3	160	0.6	5.0	.	390	.	190	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=POND STATION LOCATION=YSWPOND-1

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
315	24APR85	38258	.	9.5	4480	-1.0	22.0	-1	480	-0.1	205	.	.	.
316	14MAY85	47712	.	9.3	5660	-1.0	25.0	-1	580	-0.1	190	.	.	.
317	26JUN85	30324	.	9.2	.	1.2	.	-1	810	-0.1	180	.	.	.
318	24JUL85	32800	16.7	9.1	2040	0.6	14.0	-1	900	-0.1	210	.	.	.
319	20AUG85	33396	15.0	9.1	1620	0.4	14.5	-1	1000	-0.1	160	.	.	.
320	24SEP85	38380	.	9.1	1818	0.1	19.0	.	670	.	210	.	.	.
321	26OCT85	42218	.	9.1	2640	0.6	22.0	.	1200	.	190	.	.	.

STATION TYPE=POND STATION LOCATION=YSWPOND-10

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
322	24APR85	11426	.	8.9	720	-1.0	27.5	-1	640	-0.1	220	.	.	.
323	14MAY85	13632	.	8.8	768	2.3	31.0	-1	680	-0.1	190	.	.	.
324	26JUN85	13959	.	8.7	.	0.3	.	-1	660	-0.1	198	.	.	.
325	24JUL85	13104	18.3	8.8	608	0.3	17.0	-1	760	-0.1	210	.	.	.
326	20AUG85	15688	15.0	8.8	564	0.2	19.5	-1	960	-0.1	175	.	.	.
327	24SEP85	19422	.	8.7	636	0.1	26.0	.	800	.	220	.	.	.
328	26OCT85	19152	.	8.7	152	0.7	27.0	.	1200	.	190	.	.	.

STATION TYPE=POND STATION LOCATION=YSWPOND-11

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
329	24APR85	15562	.	9.2	1108	-1.0	17.0	-1	640	-0.1	170	.	.	.
330	14MAY85	17040	.	9.1	1240	-1.0	20.0	-1	670	-0.1	165	.	.	.
331	26JUN85	10514	.	8.5	.	0.2	.	-1	600	.	107	.	.	.
332	24JUL85	8568	17.2	8.5	196	0.4	7.0	-1	610	-0.1	105	.	.	.
333	20AUG85	9296	15.0	8.6	588	0.2	6.0	-1	730	-0.1	92	.	.	.
334	24SEP85	12100	.	8.4	164	-0.1	8.3	.	640	.	151	.	.	.
335	26OCT85	11088	.	8.3	152	0.4	8.2	.	730	.	128	.	.	.

STATION TYPE=POND STATION LOCATION=YSWPOND-12

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
336	24APR85	11400	.	8.9	700	-1.0	28.0	-1	620	-0.1	220	.	.	.
337	14MAY85	13632	.	8.8	760	2.7	31.5	-1	690	-0.1	180	.	.	.
338	26JUN85	10774	.	8.7	.	0.5	.	-1	710	-0.1	196	.	.	.
339	24JUL85	12761	18.3	8.8	580	0.3	16.8	-1	790	-0.1	215	.	.	.
340	20AUG85	13212	15.0	8.8	596	0.4	19.5	-1	940	-0.1	165	.	.	.
341	24SEP85	19100	.	8.7	632	0.1	26.0	.	820	.	220	.	.	.
342	26OCT85	19152	.	8.7	688	0.8	27.0	.	1200	.	190	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=POND STATION LOCATION=YSWPOND-2

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
343	24APR85	37224	.	9.5	4460	-1.0	22.5	-1	500	-0.1	210	.	.	.
344	14MAY85	47712	.	9.2	5660	-1.0	26.5	-1	610	-0.1	195	.	.	.
345	26JUN85	29154	.	9.2	.	1.3	.	-1	815	-0.1	180	.	.	.
346	24JUL85	28859	16.7	9.1	1936	0.6	14.1	-1	950	-0.1	212	.	.	.
347	20AUG85	31473	15.0	9.1	1616	0.4	14.1	-1	1000	-0.1	160	.	.	.
348	24SEP85	39390	.	9.1	2360	0.1	8.4	.	740	.	220	.	.	.
349	26OCT85	42218	.	9.1	2632	0.5	22.0	.	1200	.	190	.	.	.

STATION TYPE=POND STATION LOCATION=YSWPOND-3

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
350	24APR85	11374	.	8.5	404	8.1	18.0	-1	990	-0.1	190	.	.	.
351	14MAY85	13064	.	8.6	370	8.2	22.0	-1	1000	-0.1	180	.	.	.
352	26JUN85	7608	.	8.3	.	4.8	.	-1	860	.	104	.	.	.
353	24JUL85	7622	17.2	8.4	152	1.7	8.2	-1	810	-0.1	103	.	.	.
354	20AUG85	7047	15.0	8.4	280	0.9	7.0	-1	725	-0.1	70	.	.	.
355	24SEP85	8132	.	8.3	228	0.5	8.2	.	620	.	240	.	.	.
356	26OCT85	8600	.	8.2	192	1.2	9.1	.	840	.	105	.	.	.

STATION TYPE=POND STATION LOCATION=YSWPOND-4

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
357	24APR85	10857	.	8.5	348	9.1	20.0	-1	1000	-0.1	180	.	.	.
358	14MAY85	12496	.	8.5	368	8.2	22.5	-1	1000	-0.1	180	.	.	.
359	26JUN85	7632	.	8.2	.	5.0	.	-1	715	.	111	.	.	.
360	24JUL85	6174	18.3	8.3	140	1.5	7.2	-1	620	-0.1	99	.	.	.
361	20AUG85	7047	15.0	8.3	172	0.9	7.2	-1	725	-0.1	70	.	.	.
362	24SEP85	7762	.	8.3	188	0.5	21.0	.	630	.	149	.	.	.
363	26OCT85	8600	.	8.2	200	1.2	9.0	.	840	.	135	.	.	.

STATION TYPE=POND STATION LOCATION=YSWPOND-5

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
364	24APR85	43428	.	9.6	3400	-1.0	23.5	-1	410	-0.1	440	.	.	.
365	14MAY85	46576	.	9.2	3580	-1.0	25.0	-1	460	-0.1	250	.	.	.
366	26JUN85	42927	.	9.1	.	0.4	.	-1	520	-0.1	240	.	.	.
367	24JUL85	46215	17.2	9.2	2692	-0.1	16.0	-1	550	-0.1	205	.	.	.
368	20AUG85	48768	15.0	9.2	2588	0.5	17.2	-1	620	-0.1	160	.	.	.
369	24SEP85	50400	.	9.1	2120	-0.1	21.0	.	500	.	205	.	.	.
370	26OCT85	42336	.	9.2	1940	0.4	15.5	.	500	.	175	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=POND STATION LOCATION=YSWPOND-6

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
371	24APR85	42394	.	9.6	3264	-1.0	22.5	-1	400	-0.1	410	.	.	.
372	14MAY85	49984	.	9.2	3560	-1.0	24.5	-1	460	-0.1	290	.	.	.
373	26JUN85	41720	.	9.1	.	0.3	.	-1	520	-0.1	190	.	.	.
374	24JUL85	46125	16.7	9.2	1624	-0.1	16.0	-1	560	-0.1	210	.	.	.
375	20AUG85	48768	15.0	9.2	2544	0.4	17.2	-1	640	-0.1	165	.	.	.
376	24SEP85	53318	.	9.1	2864	-0.1	9.2	.	510	.	240	.	.	.
377	26OCT85	42336	.	9.2	2020	0.4	15.5	.	520	.	175	.	.	.

STATION TYPE=POND STATION LOCATION=YSWPOND-7

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
378	24APR85	12408	.	8.9	768	-1.0	21.5	-1	1000	-0.1	190	.	.	.
379	14MAY85	13632	.	8.8	848	-1.0	26.0	-1	1000	-0.1	180	.	.	.
380	26JUN85	8500	.	8.4	.	0.9	.	-1	860	.	92	.	.	.
381	24JUL85	7140	16.1	8.5	184	0.5	8.0	-1	680	-0.1	91	.	.	.
382	20AUG85	6248	15.0	8.4	168	0.5	6.1	-1	650	-0.1	62	.	.	.
383	24SEP85	8064	.	8.4	212	0.2	26.0	.	620	.	105	.	.	.
384	26OCT85	8861	.	8.3	184	0.4	10.1	.	850	.	110	.	.	.

STATION TYPE=POND STATION LOCATION=YSWPOND-8

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
385	24APR85	12408	.	8.9	724	-1.0	27.5	-1	660	-0.1	225	.	.	.
386	14MAY85	12496	.	8.6	768	2.7	32.0	-1	680	-0.1	180	.	.	.
387	26JUN85	15030	.	8.6	.	0.3	.	-1	520	-0.1	200	.	.	.
388	24JUL85	13048	17.8	8.7	556	0.3	16.7	-1	790	-0.1	210	.	.	.
389	20AUG85	14204	15.0	8.8	596	0.2	19.2	-1	960	-0.1	175	.	.	.
390	24SEP85	19900	.	8.7	616	0.2	26.0	.	870	.	215	.	.	.
391	26OCT85	19152	.	8.7	672	0.7	27.0	.	1250	.	190	.	.	.

STATION TYPE=POND STATION LOCATION=YSWPOND-9

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
392	14MAY85	18176	.	9.1	1276	-1.0	20.0	-1	680	-0.1	190	.	.	.
393	26JUN85	10252	.	8.5	.	0.2	.	-1	600	-0.1	111	.	.	.
394	24JUL85	8058	17.2	8.5	196	0.4	7.1	-1	520	-0.1	107	.	.	.
395	20AUG85	9296	15.0	8.6	192	0.2	6.2	-1	730	-0.1	95	.	.	.
396	24SEP85	12425	.	8.4	172	-0.1	8.2	.	650	.	150	.	.	.
397	26OCT85	10936	.	8.4	192	0.7	8.2	.	730	.	128	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=BH-14

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
398	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.1	.	.
399	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.
400	16JAN85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
401	23JAN85	.	.	.	.	.	.	.	.	.	.	6714.8	.	.
402	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
403	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
404	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
405	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
406	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
407	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
408	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.5	.	.
409	20MAR85	.	.	.	.	.	.	.	.	.	.	6717.6	.	.
410	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.2	.	.
411	09APR85	.	.	.	.	.	.	.	.	.	.	6721.0	.	.
412	18APR85	.	.	.	.	.	.	.	.	.	.	6722.8	.	.
413	25APR85	.	.	.	.	.	.	.	.	.	.	6724.2	.	.
414	15MAY85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.
415	16MAY85	.	.	.	.	.	.	.	.	.	.	6678.7	.	.
416	17MAY85	.	.	.	.	.	.	.	.	.	.	6660.2	.	.
417	18MAY85	.	.	.	.	.	.	.	.	.	.	6655.1	.	.
418	19MAY85	.	.	.	.	.	.	.	.	.	.	6643.1	.	.
419	20MAY85	.	.	.	.	.	.	.	.	.	.	6637.9	.	.
420	21MAY85	.	.	.	.	.	.	.	.	.	.	6638.4	.	.
421	22MAY85	.	.	.	.	.	.	.	.	.	.	6651.1	.	.
422	23MAY85	.	.	.	.	.	.	.	.	.	.	6648.8	.	.
423	24MAY85	.	.	.	.	.	.	.	.	.	.	6634.0	.	.
424	25MAY85	.	.	.	.	.	.	.	.	.	.	6626.7	.	.
425	26MAY85	.	.	.	.	.	.	.	.	.	.	6620.1	.	.
426	27MAY85	.	.	.	.	.	.	.	.	.	.	6614.9	.	.
427	28MAY85	.	.	.	.	.	.	.	.	.	.	6616.7	.	.
428	29MAY85	.	.	.	.	.	.	.	.	.	.	6610.4	.	.
429	30MAY85	.	.	.	.	.	.	.	.	.	.	6604.4	.	.
430	31MAY85	.	.	.	.	.	.	.	.	.	.	6550.5	.	.
431	01JUN85	.	.	.	.	.	.	.	.	.	.	6599.8	.	.
432	02JUN85	.	.	.	.	.	.	.	.	.	.	6653.4	.	.
433	03JUN85	.	.	.	.	.	.	.	.	.	.	6667.2	.	.
434	04JUN85	.	.	.	.	.	.	.	.	.	.	6681.3	.	.
435	05JUN85	.	.	.	.	.	.	.	.	.	.	6687.4	.	.
436	06JUN85	.	.	.	.	.	.	.	.	.	.	6691.8	.	.
437	07JUN85	.	.	.	.	.	.	.	.	.	.	6695.8	.	.
438	08JUN85	.	.	.	.	.	.	.	.	.	.	6699.0	.	.
439	09JUN85	.	.	.	.	.	.	.	.	.	.	6701.4	.	.
440	10JUN85	.	.	.	.	.	.	.	.	.	.	6702.8	.	.
441	11JUN85	.	.	.	.	.	.	.	.	.	.	6704.4	.	.
442	12JUN85	.	.	.	.	.	.	.	.	.	.	6705.7	.	.
443	13JUN85	.	.	.	.	.	.	.	.	.	.	6706.9	.	.
444	19JUN85	.	.	.	.	.	.	.	.	.	.	6711.0	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=BH-14

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
445	26JUN85	.	.	.	.	.	.	.	.	.	.	6714.1	.	.
446	03JUL85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.
447	11JUL85	.	.	.	.	.	.	.	.	.	.	6717.7	.	.
448	17JUL85	.	.	.	.	.	.	.	.	.	.	6718.8	.	.
449	25JUL85	.	.	.	.	.	.	.	.	.	.	6720.0	.	.
450	31JUL85	.	.	.	.	.	.	.	.	.	.	6721.3	.	.
451	07AUG85	.	.	.	.	.	.	.	.	.	.	6722.6	.	.
452	14AUG85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
453	21AUG85	.	.	.	.	.	.	.	.	.	.	6721.3	.	.
454	28AUG85	.	.	.	.	.	.	.	.	.	.	6726.3	.	.
455	04SEP85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
456	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
457	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
458	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
459	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
460	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
461	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
462	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
463	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
464	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
465	22NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
466	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
467	04DEC85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
468	12DEC85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
469	19DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
470	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.

STATION TYPE=RTAB STATION LOCATION=BH-15

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
471	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.6	.	.
472	09JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
473	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
474	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
475	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
476	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
477	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
478	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
479	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
480	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
481	14MAR85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
482	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.1	.	.
483	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.7	.	.
484	09APR85	.	.	.	.	.	.	.	.	.	.	6721.1	.	.
485	18APR85	.	.	.	.	.	.	.	.	.	.	6723.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=BH-15

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
486	25APR85	.	.	.	.	.	.	.	.	.	.	6724.7	.	.
487	15MAY85	.	.	.	.	.	.	.	.	.	.	6706.6	.	.
488	19MAY85	.	.	.	.	.	.	.	.	.	.	6620.0	.	.
489	21MAY85	.	.	.	.	.	.	.	.	.	.	6622.7	.	.
490	22MAY85	.	.	.	.	.	.	.	.	.	.	6642.1	.	.
491	23MAY85	.	.	.	.	.	.	.	.	.	.	6647.1	.	.
492	24MAY85	.	.	.	.	.	.	.	.	.	.	6611.7	.	.
493	25MAY85	.	.	.	.	.	.	.	.	.	.	6601.5	.	.
494	26MAY85	.	.	.	.	.	.	.	.	.	.	6590.7	.	.
495	27MAY85	.	.	.	.	.	.	.	.	.	.	6581.5	.	.
496	28MAY85	.	.	.	.	.	.	.	.	.	.	6588.4	.	.
497	29MAY85	.	.	.	.	.	.	.	.	.	.	6574.9	.	.
498	03JUN85	.	.	.	.	.	.	.	.	.	.	6669.1	.	.
499	04JUN85	.	.	.	.	.	.	.	.	.	.	6683.9	.	.
500	05JUN85	.	.	.	.	.	.	.	.	.	.	6689.9	.	.
501	06JUN85	.	.	.	.	.	.	.	.	.	.	6694.1	.	.
502	07JUN85	.	.	.	.	.	.	.	.	.	.	6698.3	.	.
503	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.4	.	.
504	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.8	.	.
505	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.7	.	.
506	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.7	.	.
507	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.4	.	.
508	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.4	.	.
509	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.7	.	.
510	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.9	.	.
511	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
512	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.9	.	.
513	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.7	.	.
514	05SEP85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
515	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
516	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
517	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
518	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
519	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
520	22NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
521	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
522	04DEC85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
523	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
524	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=MINE

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
525	01JAN85	.	.	.	.	.	.	.	.	.	.	6714.5	0	.
526	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.5	0	.
527	03JAN85	.	.	.	.	.	.	.	.	.	.	6714.5	0	.
528	04JAN85	.	.	.	.	.	.	.	.	.	.	6714.6	0	.
529	05JAN85	.	.	.	.	.	.	.	.	.	.	6714.6	0	.
530	06JAN85	.	.	.	.	.	.	.	.	.	.	6714.7	0	.
531	07JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	0	.
532	08JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	0	.
533	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.8	0	.
534	10JAN85	.	.	.	.	.	.	.	.	.	.	6714.7	0	.
535	11JAN85	.	.	.	.	.	.	.	.	.	.	6714.7	0	.
536	12JAN85	.	.	.	.	.	.	.	.	.	.	6714.8	0	.
537	13JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	0	.
538	14JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	0	.
539	15JAN85	.	.	.	.	.	.	.	.	.	.	6715.0	0	.
540	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.0	0	.
541	17JAN85	.	.	.	.	.	.	.	.	.	.	6715.0	0	.
542	18JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	0	.
543	19JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	0	.
544	20JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	0	.
545	21JAN85	.	.	.	.	.	.	.	.	.	.	6715.2	0	.
546	22JAN85	.	.	.	.	.	.	.	.	.	.	6715.2	0	.
547	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.3	0	.
548	24JAN85	.	.	.	.	.	.	.	.	.	.	6715.3	0	.
549	25JAN85	.	.	.	.	.	.	.	.	.	.	6715.3	0	.
550	26JAN85	.	.	.	.	.	.	.	.	.	.	6715.3	0	.
551	27JAN85	.	.	.	.	.	.	.	.	.	.	6715.4	0	.
552	28JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	0	.
553	29JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	0	.
554	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.6	0	.
555	31JAN85	.	.	.	.	.	.	.	.	.	.	6715.6	0	.
556	01FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	0	.
557	02FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	0	.
558	03FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	0	.
559	04FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	0	.
560	05FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	0	.
561	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	0	.
562	07FEB85	.	.	.	.	.	.	.	.	.	.	6715.7	0	.
563	08FEB85	.	.	.	.	.	.	.	.	.	.	6715.7	0	.
564	09FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	0	.
565	10FEB85	.	.	.	.	.	.	.	.	.	.	6715.7	0	.
566	11FEB85	.	.	.	.	.	.	.	.	.	.	6715.6	0	.
567	12FEB85	.	.	.	.	.	.	.	.	.	.	6715.7	0	.
568	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.7	0	.
569	14FEB85	.	.	.	.	.	.	.	.	.	.	6714.9	60	.
570	15FEB85	.	.	.	.	.	.	.	.	.	.	6714.9	60	.
571	16FEB85	.	.	.	.	.	.	.	.	.	.	6715.1	60	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=MINE

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
572	17FEB85	.	.	.	.	.	.	.	.	.	.	6715.1	60	.
573	18FEB85	.	.	.	.	.	.	.	.	.	.	6715.0	60	.
574	19FEB85	.	.	.	.	.	.	.	.	.	.	6714.9	60	.
575	20FEB85	.	.	.	.	.	.	.	.	.	.	6715.1	60	.
576	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.0	60	.
577	22FEB85	.	.	.	.	.	.	.	.	.	.	6715.1	60	.
578	23FEB85	.	.	.	.	.	.	.	.	.	.	6715.0	60	.
579	24FEB85	.	.	.	.	.	.	.	.	.	.	6715.1	60	.
580	25FEB85	1833	13	7.6	.	-1	1.2	-1	2	-0.1	12	6715.2	60	.
581	26FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	60	.
582	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	60	.
583	28FEB85	.	.	.	.	.	.	.	.	.	.	6715.1	60	.
584	01MAR85	.	.	.	.	.	.	.	.	.	.	6715.1	60	.
585	02MAR85	.	.	.	.	.	.	.	.	.	.	6715.3	60	.
586	03MAR85	.	.	.	.	.	.	.	.	.	.	6715.7	60	.
587	04MAR85	.	.	.	.	.	.	.	.	.	.	6714.2	60	.
588	05MAR85	.	.	.	.	.	.	.	.	.	.	6715.1	60	.
589	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.1	60	.
590	07MAR85	.	.	.	.	.	.	.	.	.	.	6715.0	60	.
591	08MAR85	.	.	.	.	.	.	.	.	.	.	6715.8	0	.
592	09MAR85	.	.	.	.	.	.	.	.	.	.	6716.0	0	.
593	10MAR85	.	.	.	.	.	.	.	.	.	.	6716.1	0	.
594	11MAR85	.	.	.	.	.	.	.	.	.	.	6716.5	0	.
595	12MAR85	.	.	.	.	.	.	.	.	.	.	6716.7	0	.
596	13MAR85	.	.	.	.	.	.	.	.	.	.	6716.6	0	.
597	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.8	0	.
598	15MAR85	.	.	.	.	.	.	.	.	.	.	6717.0	0	.
599	16MAR85	.	.	.	.	.	.	.	.	.	.	6717.1	0	.
600	17MAR85	.	.	.	.	.	.	.	.	.	.	6717.2	0	.
601	18MAR85	.	.	.	.	.	.	.	.	.	.	6717.4	0	.
602	19MAR85	.	.	.	.	.	.	.	.	.	.	6717.7	0	.
603	20MAR85	.	.	.	.	.	.	.	.	.	.	6717.8	0	.
604	21MAR85	.	.	.	.	.	.	.	.	.	.	6718.0	0	.
605	22MAR85	.	.	.	.	.	.	.	.	.	.	6718.2	0	.
606	23MAR85	.	.	.	.	.	.	.	.	.	.	6718.4	0	.
607	24MAR85	.	.	.	.	.	.	.	.	.	.	6718.7	0	.
608	25MAR85	1809	13	7.7	.	-1	0.8	-1	2	-0.1	15	6719.0	0	.
609	26MAR85	.	.	.	.	.	.	.	.	.	.	6719.1	0	.
610	27MAR85	.	.	.	.	.	.	.	.	.	.	6719.4	0	.
611	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.5	0	.
612	29MAR85	.	.	.	.	.	.	.	.	.	.	6719.7	0	.
613	30MAR85	.	.	.	.	.	.	.	.	.	.	6719.6	0	.
614	31MAR85	.	.	.	.	.	.	.	.	.	.	6719.7	0	.
615	01APR85	.	.	.	.	.	.	.	.	.	.	6719.7	0	.
616	02APR85	.	.	.	.	.	.	.	.	.	.	6719.9	0	.
617	03APR85	.	.	.	.	.	.	.	.	.	.	6720.1	0	.
618	04APR85	.	.	.	.	.	.	.	.	.	.	6720.4	0	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=MINE

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
619	05APR85	.	.	.	.	.	.	.	.	.	.	6720.5	0	.
620	06APR85	.	.	.	.	.	.	.	.	.	.	6720.7	0	.
621	07APR85	.	.	.	.	.	.	.	.	.	.	6720.9	0	.
622	08APR85	.	.	.	.	.	.	.	.	.	.	6721.1	0	.
623	09APR85	.	.	.	.	.	.	.	.	.	.	6721.3	0	.
624	10APR85	.	.	.	.	.	.	.	.	.	.	6721.7	0	.
625	11APR85	.	.	.	.	.	.	.	.	.	.	6721.9	0	.
626	12APR85	.	.	.	.	.	.	.	.	.	.	6722.0	0	.
627	13APR85	.	.	.	.	.	.	.	.	.	.	6722.1	0	.
628	14APR85	.	.	.	.	.	.	.	.	.	.	6722.4	0	.
629	15APR85	.	.	.	.	.	.	.	.	.	.	6722.7	0	.
630	16APR85	.	.	.	.	.	.	.	.	.	.	6722.8	.	.
631	17APR85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
632	18APR85	.	.	.	.	.	.	.	.	.	.	6723.1	.	.
633	19APR85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
634	20APR85	.	.	.	.	.	.	.	.	.	.	6723.6	.	.
635	21APR85	.	.	.	.	.	.	.	.	.	.	6723.7	.	.
636	22APR85	.	.	.	.	.	.	.	.	.	.	6724.0	.	.
637	23APR85	.	.	.	.	.	.	.	.	.	.	6723.9	.	.
638	24APR85	.	.	.	.	.	.	.	.	.	.	6724.1	.	.
639	25APR85	.	.	.	.	.	.	.	.	.	.	6724.5	.	.
640	26APR85	.	.	.	.	.	.	.	.	.	.	6724.6	.	.
641	27APR85	.	.	.	.	.	.	.	.	.	.	6724.7	.	.
642	28APR85	.	.	.	.	.	.	.	.	.	.	6724.9	.	.
643	29APR85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
644	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.4	.	.
645	02MAY85	.	.	.	.	.	.	.	.	.	.	6725.5	.	.
646	03MAY85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
647	04MAY85	.	.	.	.	.	.	.	.	.	.	6725.9	.	.
648	05MAY85	.	.	.	.	.	.	.	.	.	.	6726.3	.	.
649	06MAY85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
650	07MAY85	.	.	.	.	.	.	.	.	.	.	6726.6	.	.
651	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
652	09MAY85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
653	10MAY85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
654	11MAY85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
655	12MAY85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
656	13MAY85	1885	13	8	320	-1	0.6	-1	2	-0.1	28	6728.1	.	.
657	14MAY85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
658	15MAY85	.	.	.	.	.	.	.	.	.	.	6705.0	.	.
659	16MAY85	.	.	.	.	.	.	.	.	.	.	6671.3	.	.
660	17MAY85	.	.	.	.	.	.	.	.	.	.	6643.1	.	.
661	18MAY85	.	.	.	.	.	.	.	.	.	.	6639.3	.	.
662	19MAY85	.	.	.	.	.	.	.	.	.	.	6621.1	.	.
663	20MAY85	.	.	.	.	.	.	.	.	.	.	6610.2	.	.
664	21MAY85	.	.	.	.	.	.	.	.	.	.	6622.2	.	.
665	22MAY85	.	.	.	.	.	.	.	.	.	.	6641.0	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=MINE

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
666	23MAY85	.	.	.	.	.	.	.	.	.	.	6646.3	.	.
667	24MAY85	.	.	.	.	.	.	.	.	.	.	6616.6	.	.
668	25MAY85	.	.	.	.	.	.	.	.	.	.	6607.2	.	.
669	26MAY85	.	.	.	.	.	.	.	.	.	.	6594.1	.	.
670	27MAY85	.	.	.	.	.	.	.	.	.	.	6586.8	.	.
671	28MAY85	.	.	.	.	.	.	.	.	.	.	6587.4	.	.
672	29MAY85	.	.	.	.	.	.	.	.	.	.	6573.7	.	.
673	30MAY85	.	.	.	.	.	.	.	.	.	.	6563.3	.	.
674	31MAY85	.	.	.	.	.	.	.	.	.	.	6556.4	.	.
675	01JUN85	.	.	.	.	.	.	.	.	.	.	6554.3	.	.
676	02JUN85	.	.	.	.	.	.	.	.	.	.	6648.9	.	.
677	03JUN85	.	.	.	.	.	.	.	.	.	.	6670.3	.	.
678	04JUN85	.	.	.	.	.	.	.	.	.	.	6681.3	.	.
679	05JUN85	.	.	.	.	.	.	.	.	.	.	6688.3	.	.
680	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.0	.	.
681	07JUN85	.	.	.	.	.	.	.	.	.	.	6696.5	.	.
682	08JUN85	.	.	.	.	.	.	.	.	.	.	6700.6	.	.
683	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.2	.	.
684	10JUN85	.	.	.	.	.	.	.	.	.	.	6705.0	.	.
685	13JUN85	.	.	.	.	.	.	.	.	.	.	6709.1	.	.
686	14JUN85	.	.	.	.	.	.	.	.	.	.	6710.2	.	.
687	15JUN85	.	.	.	.	.	.	.	.	.	.	6711.0	.	.
688	16JUN85	.	.	.	.	.	.	.	.	.	.	6711.9	.	.
689	17JUN85	.	.	.	.	.	.	.	.	.	.	6712.6	.	.
690	18JUN85	1811	14.2	7.5	.	0.2	1.3	-1	1	-0.1	12	6713.2	.	.
691	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
692	20JUN85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
693	21JUN85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
694	22JUN85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
695	23JUN85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
696	24JUN85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
697	25JUN85	.	.	.	.	.	.	.	.	.	.	6716.7	.	.
698	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.8	.	.
699	27JUN85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
700	28JUN85	.	.	.	.	.	.	.	.	.	.	6717.4	.	.
701	29JUN85	.	.	.	.	.	.	.	.	.	.	6717.8	.	.
702	30JUN85	.	.	.	.	.	.	.	.	.	.	6718.0	.	.
703	01JUL85	.	.	.	.	.	.	.	.	.	.	6718.2	.	.
704	02JUL85	.	.	.	.	.	.	.	.	.	.	6718.4	.	.
705	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.7	.	.
706	04JUL85	.	.	.	.	.	.	.	.	.	.	6718.9	.	.
707	05JUL85	.	.	.	.	.	.	.	.	.	.	6719.1	.	.
708	06JUL85	.	.	.	.	.	.	.	.	.	.	6719.3	.	.
709	07JUL85	.	.	.	.	.	.	.	.	.	.	6719.5	.	.
710	08JUL85	.	.	.	.	.	.	.	.	.	.	6719.7	.	.
711	09JUL85	.	.	.	.	.	.	.	.	.	.	6720.0	.	.
712	10JUL85	.	.	.	.	.	.	.	.	.	.	6720.2	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=MINE

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
713	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.5	.	.
714	12JUL85	.	.	.	.	.	.	.	.	.	.	6720.5	.	.
715	13JUL85	.	.	.	.	.	.	.	.	.	.	6720.6	.	.
716	14JUL85	.	.	.	.	.	.	.	.	.	.	6720.7	.	.
717	15JUL85	.	.	.	.	.	.	.	.	.	.	6720.9	.	.
718	16JUL85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
719	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.5	.	.
720	18JUL85	.	.	.	.	.	.	.	.	.	.	6721.6	.	.
721	19JUL85	.	.	.	.	.	.	.	.	.	.	6721.7	.	.
722	20JUL85	.	.	.	.	.	.	.	.	.	.	6721.9	.	.
723	21JUL85	.	.	.	.	.	.	.	.	.	.	6722.1	.	.
724	22JUL85	.	.	.	.	.	.	.	.	.	.	6722.3	.	.
725	23JUL85	.	.	.	.	.	.	.	.	.	.	6722.5	.	.
726	24JUL85	.	.	.	.	.	.	.	.	.	.	6722.7	.	.
727	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.8	.	.
728	26JUL85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
729	27JUL85	1923	14.8	8.0	360	0.7	0.7	-1	-1	-0.1	15	6723.2	.	.
730	28JUL85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
731	29JUL85	.	.	.	.	.	.	.	.	.	.	6723.7	.	.
732	30JUL85	.	.	.	.	.	.	.	.	.	.	6723.8	.	.
733	31JUL85	.	.	.	.	.	.	.	.	.	.	6724.0	.	.
734	01AUG85	.	.	.	.	.	.	.	.	.	.	6724.2	.	.
735	02AUG85	.	.	.	.	.	.	.	.	.	.	6724.4	.	.
736	03AUG85	.	.	.	.	.	.	.	.	.	.	6724.6	.	.
737	04AUG85	.	.	.	.	.	.	.	.	.	.	6724.8	.	.
738	05AUG85	.	.	.	.	.	.	.	.	.	.	6724.9	.	.
739	06AUG85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
740	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.2	.	.
741	08AUG85	.	.	.	.	.	.	.	.	.	.	6725.4	.	.
742	09AUG85	.	.	.	.	.	.	.	.	.	.	6725.4	.	.
743	10AUG85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
744	11AUG85	.	.	.	.	.	.	.	.	.	.	6725.8	.	.
745	12AUG85	.	.	.	.	.	.	.	.	.	.	6725.8	.	.
746	13AUG85	.	.	.	.	.	.	.	.	.	.	6725.9	.	.
747	14AUG85	.	.	.	.	.	.	.	.	.	.	6726.0	.	.
748	15AUG85	.	.	.	.	.	.	.	.	.	.	6726.1	.	.
749	16AUG85	.	.	.	.	.	.	.	.	.	.	6726.2	.	.
750	17AUG85	.	.	.	.	.	.	.	.	.	.	6726.2	.	.
751	18AUG85	.	.	.	.	.	.	.	.	.	.	6723.1	.	.
752	19AUG85	.	.	.	.	.	.	.	.	.	.	6718.9	.	.
753	20AUG85	.	.	.	.	.	.	.	.	.	.	6720.7	.	.
754	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.9	.	.
755	22AUG85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
756	23AUG85	1754	15.0	8.2	332	0.4	0.6	-1	-1	-0.1	-1	6725.6	.	.
757	24AUG85	.	.	.	.	.	.	.	.	.	.	6726.0	.	.
758	25AUG85	.	.	.	.	.	.	.	.	.	.	6726.3	.	.
759	26AUG85	.	.	.	.	.	.	.	.	.	.	6726.4	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=MINE

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
760	27AUG85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
761	28AUG85	.	.	.	.	.	.	.	.	.	.	6726.6	.	.
762	29AUG85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
763	30AUG85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
764	31AUG85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
765	01SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
766	02SEP85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
767	03SEP85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
768	04SEP85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
769	05SEP85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
770	06SEP85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
771	07SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
772	08SEP85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
773	09SEP85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
774	10SEP85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
775	11SEP85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
776	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
777	13SEP85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
778	14SEP85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
779	15SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
780	16SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
781	17SEP85	1580	15.0	8.1	288	0.2	0.6	.	-1	.	5	6728.1	.	.
782	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
783	19SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
784	20SEP85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
785	21SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
786	22SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
787	23SEP85	.	.	.	.	.	.	.	.	.	.	6726.0	.	.
788	24SEP85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
789	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
790	26SEP85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
791	27SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
792	28SEP85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
793	29SEP85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
794	30SEP85	.	.	.	.	.	.	.	.	.	.	6720.9	.	.
795	01OCT85	.	.	.	.	.	.	.	.	.	.	6725.2	.	.
796	02OCT85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
797	03OCT85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
798	04OCT85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
799	05OCT85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
800	06OCT85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
801	07OCT85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
802	08OCT85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
803	09OCT85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
804	10OCT85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
805	11OCT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
806	12OCT85	1632	14.3	8.6	276	0.4	0.7	.	-1	.	5	6728.4	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=MINE

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
807	13OCT85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
808	14OCT85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
809	15OCT85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
810	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
811	17OCT85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
812	18OCT85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
813	19OCT85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
814	20OCT85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
815	21OCT85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
816	22OCT85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
817	23OCT85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
818	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
819	25OCT85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
820	26OCT85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
821	27OCT85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
822	28OCT85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
823	29OCT85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
824	30OCT85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
825	31OCT85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
826	01NOV85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
827	02NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
828	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
829	04NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
830	05NOV85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
831	06NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
832	07NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
833	08NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
834	09NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
835	10NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
836	11NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
837	12NOV85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
838	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
839	14NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
840	15NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
841	16NOV85	1544	13.7	8.7	288	0.4	0.6	.	3	.	30	6729.4	.	.
842	17NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
843	18NOV85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
844	19NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
845	20NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
846	21NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
847	22NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
848	23NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
849	24NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
850	25NOV85	.	.	.	.	.	.	.	.	.	.	6730.3	.	.
851	26NOV85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
852	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.7	.	.
853	28NOV85	.	.	.	.	.	.	.	.	.	.	6729.7	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=MINE

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
854	29NOV85	.	.	.	.	.	.	.	.	.	.	6729.8	.	.
855	30NOV85	.	.	.	.	.	.	.	.	.	.	6729.7	.	.
856	01DEC85	.	.	.	.	.	.	.	.	.	.	6729.6	.	.
857	02DEC85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
858	03DEC85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
859	04DEC85	1394	13	8.7	132	2	0.6	.	3	.	33	6729.2	.	.
860	05DEC85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
861	06DEC85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
862	07DEC85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
863	08DEC85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
864	09DEC85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
865	10DEC85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
866	11DEC85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
867	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
868	13DEC85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
869	14DEC85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
870	15DEC85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
871	16DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
872	17DEC85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
873	18DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
874	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
875	20DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
876	21DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
877	22DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
878	23DEC85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
879	24DEC85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
880	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
881	26DEC85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
882	27DEC85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
883	28DEC85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
884	29DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
885	30DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
886	31DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.

STATION TYPE=RTAB STATION LOCATION=PBC-1

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
887	20SEP85	2750	22.5	8.8	68	0.9	3.5	.	170	.	72	.	.	.
888	28SEP85	2800	22.4	7.9	32	0.9	3.5	.	155	.	38	.	.	.
889	03OCT85	2550	22.5	8.8	16	1.4	3.8	.	155	.	30	.	.	.
890	12OCT85	2681	21.7	8.5	28	1.5	3.7	.	130	.	32	.	.	.
891	16OCT85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
892	18OCT85	2661	22.4	8.6	24	0.9	3.7	.	.	.	38	.	.	.
893	23OCT85	2785	21.3	8.1	24	1.2	3.8	.	185	.	35	.	.	.
894	01NOV85	2721	22.3	8.6	24	1.0	3.6	.	210	.	50	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=PBC-1

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
895	08NOV85	2763	21.7	8.3	24	1.1	3.6	.	210	.	35	.	.	.
896	16NOV85	2721	22.0	8.5	20	1.3	3.2	.	190	.	48	.	.	.
897	22NOV85	2680	21.4	8.6	20	1.2	3.4	.	175	.	35	.	.	.
898	29NOV85	2668	21.0	8.8	28	1.1	3.5	.	185	.	40	.	.	.
899	04DEC85	2688	22.1	8.1	36	1.1	3.4	.	195	.	45	6729.6	.	.
900	11DEC85	2199	22.0	9.2	24	1.0	3.7	.	203	.	46	.	.	.
901	17DEC85	2604	22.6	8.9	20	.	4.0	.	195	.	37	.	.	.
902	19DEC85	.	.	.	.	.	.	.	.	.	.	6729.6	.	.
903	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
904	26DEC85	2541	22.5	8.5	24	1.3	3.7	.	191	.	43	.	.	.

STATION TYPE=RTAB STATION LOCATION=PBC-2

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
905	20SEP85	2540	22.0	9.4	40	0.3	1.6	.	130	.	22	.	.	.
906	28SEP85	2750	22.3	8.0	.	0.5	1.6	.	120	.	22	.	.	.
907	03OCT85	2694	22.4	8.9	16	1.4	1.6	.	115	.	30	.	.	.
908	09OCT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
909	12OCT85	2631	22.5	8.6	20	0.8	1.7	.	110	.	25	.	.	.
910	18OCT85	2631	22.8	8.8	28	0.4	1.7	.	.	.	38	.	.	.
911	23OCT85	2752	21.7	8.3	24	0.6	1.8	.	155	.	38	.	.	.
912	24OCT85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
913	01NOV85	2721	22.9	8.6	24	0.5	1.7	.	170	.	12	6729.5	.	.
914	03NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
915	08NOV85	2732	21.9	8.9	24	0.5	1.6	.	165	.	98	.	.	.
916	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.7	.	.
917	16NOV85	2702	22.3	8.6	28	0.7	1.4	.	155	.	35	.	.	.
918	22NOV85	2721	22.1	8.6	20	0.4	1.6	.	140	.	25	6729.9	.	.

STATION TYPE=RTAB STATION LOCATION=PBC-3

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
919	23OCT85	2788	21.5	8.1	24	0.7	2.3	.	165	.	48	.	.	.
920	01NOV85	2743	22.2	8.6	24	0.6	2.1	.	185	.	25	.	.	.
921	08NOV85	2843	21.4	9.0	24	0.6	2.1	.	185	.	20	.	.	.
922	16NOV85	2803	21.7	8.8	20	0.7	1.8	.	170	.	25	.	.	.
923	22NOV85	2819	21.7	8.6	24	0.6	2.0	.	155	.	25	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-1A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
924	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.8	.	.
925	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
926	14JAN85	1710	9.7	7.4	.	-1	0.8	-1	1	-0.1	20	.	.	.
927	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
928	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
929	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
930	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
931	11FEB85	1779	10.5	7.2	.	-1	1.2	-1	2	-0.1	22	.	.	.
932	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
933	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
934	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
935	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
936	11MAR85	1716	10.1	7.2	.	-1	1.0	-1	-1	-0.1	15	.	.	.
937	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.8	.	.
938	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.0	.	.
939	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.6	.	.
940	09APR85	.	.	.	.	.	.	.	.	.	.	6721.5	.	.
941	15APR85	1739	10.6	7.1	.	-1	0.6	-1	1	-0.1	20	.	.	.
942	18APR85	.	.	.	.	.	.	.	.	.	.	6723.3	.	.
943	25APR85	.	.	.	.	.	.	.	.	.	.	6724.6	.	.
944	08MAY85	1581	10.6	7.2	428	-1	0.5	-1	-1	-0.1	18	6729.5	.	.
945	15MAY85	.	.	.	.	.	.	.	.	.	.	6720.5	.	.
946	16MAY85	.	.	.	.	.	.	.	.	.	.	6697.1	.	.
947	17MAY85	.	.	.	.	.	.	.	.	.	.	6686.3	.	.
948	18MAY85	.	.	.	.	.	.	.	.	.	.	6680.3	.	.
949	19MAY85	.	.	.	.	.	.	.	.	.	.	6671.3	.	.
950	20MAY85	.	.	.	.	.	.	.	.	.	.	6663.9	.	.
951	21MAY85	.	.	.	.	.	.	.	.	.	.	6664.5	.	.
952	22MAY85	.	.	.	.	.	.	.	.	.	.	6669.2	.	.
953	23MAY85	.	.	.	.	.	.	.	.	.	.	6671.7	.	.
954	24MAY85	.	.	.	.	.	.	.	.	.	.	6659.7	.	.
955	25MAY85	.	.	.	.	.	.	.	.	.	.	6654.5	.	.
956	26MAY85	.	.	.	.	.	.	.	.	.	.	6649.2	.	.
957	27MAY85	.	.	.	.	.	.	.	.	.	.	6645.7	.	.
958	28MAY85	.	.	.	.	.	.	.	.	.	.	6644.4	.	.
959	29MAY85	.	.	.	.	.	.	.	.	.	.	6641.4	.	.
960	30MAY85	.	.	.	.	.	.	.	.	.	.	6635.3	.	.
961	31MAY85	.	.	.	.	.	.	.	.	.	.	6632.7	.	.
962	01JUN85	.	.	.	.	.	.	.	.	.	.	6630.6	.	.
963	02JUN85	.	.	.	.	.	.	.	.	.	.	6659.2	.	.
964	03JUN85	.	.	.	.	.	.	.	.	.	.	6672.9	.	.
965	04JUN85	.	.	.	.	.	.	.	.	.	.	6685.4	.	.
966	05JUN85	.	.	.	.	.	.	.	.	.	.	6691.0	.	.
967	06JUN85	.	.	.	.	.	.	.	.	.	.	6695.0	.	.
968	07JUN85	.	.	.	.	.	.	.	.	.	.	6699.7	.	.
969	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.7	.	.
970	09JUN85	.	.	.	.	.	.	.	.	.	.	6704.1	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-1A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
971	10JUN85	.	.	.	.	.	.	.	.	.	.	6705.5	.	.
972	11JUN85	1389	10.7	7.3	.	-0.1	.	.	-1	.	.	6707.0	.	.
973	12JUN85	.	.	.	.	.	.	.	.	.	.	6708.2	.	.
974	13JUN85	.	.	.	.	.	.	.	.	.	.	6709.5	.	.
975	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.7	.	.
976	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.7	.	.
977	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.8	.	.
978	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.7	.	.
979	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.7	.	.
980	25JUL85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
981	27JUL85	1691	10.6	7.4	450	0.3	0.4	-1	-1	-0.1	17	.	.	.
982	31JUL85	.	.	.	.	.	.	.	.	.	.	6724.2	.	.
983	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.5	.	.
984	14AUG85	.	.	.	.	.	.	.	.	.	.	6737.1	.	.
985	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.7	.	.
986	23AUG85	1612	10.7	7.1	408	0.2	0.4	-1	-1	-0.1	-1	.	.	.
987	28AUG85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
988	04SEP85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
989	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
990	17SEP85	1720	10.9	7.1	520	-0.1	0.4	.	-1	.	11	.	.	.
991	18SEP85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
992	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
993	09OCT85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
994	12OCT85	1734	10.3	7.3	416	0.2	0.6	.	-1	.	25	.	.	.
995	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
996	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
997	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
998	03NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
999	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
1000	16NOV85	1790	9.9	7.3	592	0.2	0.4	.	-1	.	25	.	.	.
1001	22NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
1002	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.8	.	.
1003	04DEC85	.	.	.	.	.	.	.	.	.	.	6736.4	.	.
1004	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
1005	17DEC85	1647	9.8	7.2	408	.	0.4	.	-1	.	27	.	.	.
1006	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
1007	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-1S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1008	02JAN85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
1009	09JAN85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
1010	16JAN85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
1011	23JAN85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
1012	30JAN85	.	.	.	.	.	.	.	.	.	.	6726.9	.	.
1013	06FEB85	.	.	.	.	.	.	.	.	.	.	6726.7	.	.
1014	13FEB85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
1015	21FEB85	.	.	.	.	.	.	.	.	.	.	6726.3	.	.
1016	27FEB85	.	.	.	.	.	.	.	.	.	.	6726.1	.	.
1017	06MAR85	.	.	.	.	.	.	.	.	.	.	6725.4	.	.
1018	14MAR85	.	.	.	.	.	.	.	.	.	.	6749.8	.	.
1019	20MAR85	.	.	.	.	.	.	.	.	.	.	6752.6	.	.
1020	28MAR85	.	.	.	.	.	.	.	.	.	.	6752.5	.	.
1021	09APR85	.	.	.	.	.	.	.	.	.	.	6752.5	.	.
1022	18APR85	.	.	.	.	.	.	.	.	.	.	6752.1	.	.
1023	25APR85	.	.	.	.	.	.	.	.	.	.	6752.7	.	.
1024	08MAY85	.	.	.	.	.	.	.	.	.	.	6749.7	.	.
1025	15MAY85	.	.	.	.	.	.	.	.	.	.	6743.5	.	.
1026	16MAY85	.	.	.	.	.	.	.	.	.	.	6742.9	.	.
1027	17MAY85	.	.	.	.	.	.	.	.	.	.	6742.5	.	.
1028	18MAY85	.	.	.	.	.	.	.	.	.	.	6756.2	.	.
1029	19MAY85	.	.	.	.	.	.	.	.	.	.	6758.9	.	.
1030	20MAY85	.	.	.	.	.	.	.	.	.	.	6761.7	.	.
1031	21MAY85	.	.	.	.	.	.	.	.	.	.	6766.0	.	.
1032	22MAY85	.	.	.	.	.	.	.	.	.	.	6766.9	.	.
1033	23MAY85	.	.	.	.	.	.	.	.	.	.	6766.6	.	.
1034	24MAY85	.	.	.	.	.	.	.	.	.	.	6766.6	.	.
1035	25MAY85	.	.	.	.	.	.	.	.	.	.	6767.1	.	.
1036	26MAY85	.	.	.	.	.	.	.	.	.	.	6767.6	.	.
1037	27MAY85	.	.	.	.	.	.	.	.	.	.	6768.1	.	.
1038	28MAY85	.	.	.	.	.	.	.	.	.	.	6768.1	.	.
1039	29MAY85	.	.	.	.	.	.	.	.	.	.	6768.2	.	.
1040	30MAY85	.	.	.	.	.	.	.	.	.	.	6768.2	.	.
1041	31MAY85	.	.	.	.	.	.	.	.	.	.	6767.7	.	.
1042	01JUN85	.	.	.	.	.	.	.	.	.	.	6768.4	.	.
1043	02JUN85	.	.	.	.	.	.	.	.	.	.	6767.9	.	.
1044	03JUN85	.	.	.	.	.	.	.	.	.	.	6767.2	.	.
1045	04JUN85	.	.	.	.	.	.	.	.	.	.	6756.0	.	.
1046	05JUN85	.	.	.	.	.	.	.	.	.	.	6752.9	.	.
1047	06JUN85	.	.	.	.	.	.	.	.	.	.	6752.8	.	.
1048	07JUN85	.	.	.	.	.	.	.	.	.	.	6752.8	.	.
1049	08JUN85	.	.	.	.	.	.	.	.	.	.	6752.8	.	.
1050	09JUN85	.	.	.	.	.	.	.	.	.	.	6752.8	.	.
1051	10JUN85	.	.	.	.	.	.	.	.	.	.	6752.8	.	.
1052	11JUN85	.	.	.	.	.	.	.	.	.	.	6751.9	.	.
1053	12JUN85	.	.	.	.	.	.	.	.	.	.	6751.0	.	.
1054	13JUN85	.	.	.	.	.	.	.	.	.	.	6750.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-1S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1055	19JUN85	.	.	.	.	.	.	.	.	.	.	6746.0	.	.
1056	26JUN85	.	.	.	.	.	.	.	.	.	.	6741.6	.	.
1057	03JUL85	.	.	.	.	.	.	.	.	.	.	6738.8	.	.
1058	11JUL85	.	.	.	.	.	.	.	.	.	.	6736.6	.	.
1059	17JUL85	.	.	.	.	.	.	.	.	.	.	6736.0	.	.
1060	25JUL85	.	.	.	.	.	.	.	.	.	.	6736.8	.	.
1061	31JUL85	.	.	.	.	.	.	.	.	.	.	6738.2	.	.
1062	07AUG85	.	.	.	.	.	.	.	.	.	.	6739.6	.	.
1063	14AUG85	.	.	.	.	.	.	.	.	.	.	6726.1	.	.
1064	21AUG85	.	.	.	.	.	.	.	.	.	.	6734.1	.	.
1065	28AUG85	.	.	.	.	.	.	.	.	.	.	6732.7	.	.
1066	04SEP85	.	.	.	.	.	.	.	.	.	.	6731.5	.	.
1067	12SEP85	.	.	.	.	.	.	.	.	.	.	6730.8	.	.
1068	18SEP85	.	.	.	.	.	.	.	.	.	.	6730.4	.	.
1069	25SEP85	.	.	.	.	.	.	.	.	.	.	6730.1	.	.
1070	090CT85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
1071	160CT85	.	.	.	.	.	.	.	.	.	.	6752.9	.	.
1072	240CT85	.	.	.	.	.	.	.	.	.	.	6746.3	.	.
1073	01NOV85	.	.	.	.	.	.	.	.	.	.	6741.7	.	.
1074	03NOV85	.	.	.	.	.	.	.	.	.	.	6740.8	.	.
1075	13NOV85	.	.	.	.	.	.	.	.	.	.	6738.0	.	.
1076	22NOV85	.	.	.	.	.	.	.	.	.	.	6737.6	.	.
1077	27NOV85	.	.	.	.	.	.	.	.	.	.	6737.2	.	.
1078	04DEC85	.	.	.	.	.	.	.	.	.	.	6736.0	.	.
1079	12DEC85	.	.	.	.	.	.	.	.	.	.	6735.6	.	.
1080	19DEC85	.	.	.	.	.	.	.	.	.	.	6733.6	.	.
1081	25DEC85	.	.	.	.	.	.	.	.	.	.	6733.0	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-2A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1082	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.6	.	.
1083	03JAN85	2409	15.9	7.1	.	.	1.0	-1	6	-0.1	25	.	.	.
1084	07JAN85	2395	15.9	7.2	.	.	0.8	-1	6	-0.1	25	.	.	.
1085	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
1086	14JAN85	2390	15.9	7.3	.	-1	1.0	-1	6	-0.1	22	.	.	.
1087	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
1088	21JAN85	2448	15.6	7.2	.	-1	1.1	-1	9	0.1	25	.	.	.
1089	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
1090	28JAN85	2470	.	7.1	.	-1	1.1	-1	8	0.2	28	.	.	.
1091	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
1092	04FEB85	2490	15.7	7.1	.	-1	1.1	-1	9	-0.1	25	.	.	.
1093	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
1094	11FEB85	2585	16.6	7.2	.	-1	1.3	-1	9	-0.1	22	.	.	.
1095	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1096	18FEB85	2447	16.6	7.0	.	-1.0	1.3	-1	17	-0.1	10	.	.	.
1097	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
1098	25FEB85	2345	16.9	7.0	.	-1.0	1.1	-1	19	0.1	15	.	.	.
1099	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
1100	04MAR85	2232	16.0	6.9	.	-1.0	1.2	-1	6	-0.1	10	.	.	.
1101	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
1102	11MAR85	2325	17.0	7.2	.	-1.0	1.1	-1	6	-0.1	18	.	.	.
1103	14MAR85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
1104	18MAR85	2468	16.6	7.0	.	-1.0	0.7	-1	13	-0.1	15	.	.	.
1105	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.1	.	.
1106	25MAR85	2447	17.0	7.0	.	-1.0	0.8	-1	12	-0.1	15	.	.	.
1107	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.8	.	.
1108	01APR85	2468	16.8	6.9	.	-1.0	0.8	-1	18	-0.1	30	.	.	.
1109	08APR85	2490	17.3	7.0	.	-1.0	0.7	-1	17	-0.1	18	.	.	.
1110	09APR85	.	.	.	.	.	.	.	.	.	.	6721.5	.	.
1111	15APR85	2339	17.0	7.1	.	-1.0	0.7	-1	10	-0.1	22	.	.	.
1112	18APR85	.	.	.	.	.	.	.	.	.	.	6723.3	.	.
1113	23APR85	2369	16.5	7.2	426	-1.0	0.7	-1	11	-0.1	15	.	.	.
1114	25APR85	.	.	.	.	.	.	.	.	.	.	6724.8	.	.
1115	29APR85	2293	17.2	7.0	412	-1.0	0.8	-1	11	-0.1	18	.	.	.
1116	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.2	.	.
1117	06MAY85	2234	16.5	7.1	420	-1.0	0.8	-1	10	-0.1	22	.	.	.
1118	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
1119	13MAY85	2258	17.3	7.1	418	-1.0	0.7	-1	11	-0.1	25	.	.	.
1120	15MAY85	.	.	.	.	.	.	.	.	.	.	6711.4	.	.
1121	16MAY85	.	.	.	.	.	.	.	.	.	.	6683.7	.	.
1122	17MAY85	.	.	.	.	.	.	.	.	.	.	6661.0	.	.
1123	18MAY85	.	.	.	.	.	.	.	.	.	.	6650.5	.	.
1124	19MAY85	.	.	.	.	.	.	.	.	.	.	6641.2	.	.
1125	20MAY85	2171	15.7	7.4	.	-1.0	.	.	6	.	.	6631.3	.	.
1126	21MAY85	.	.	.	.	.	.	.	.	.	.	6634.5	.	.
1127	22MAY85	1999	15.5	7.2	.	-1.0	.	.	3	.	.	6647.9	.	.
1128	23MAY85	.	.	.	.	.	.	.	.	.	.	6652.6	.	.
1129	24MAY85	.	.	.	.	.	.	.	.	.	.	6625.3	.	.
1130	25MAY85	.	.	.	.	.	.	.	.	.	.	6615.4	.	.
1131	26MAY85	.	.	.	.	.	.	.	.	.	.	6606.3	.	.
1132	27MAY85	.	.	.	.	.	.	.	.	.	.	6599.7	.	.
1133	28MAY85	1948	16.5	7.1	.	-1.0	.	.	2	.	.	6602.2	.	.
1134	29MAY85	.	.	.	.	.	.	.	.	.	.	6594.4	.	.
1135	30MAY85	1888	13.1	7.2	528	-1.0	1.0	-1	4	-0.1	18	6586.9	.	.
1136	31MAY85	.	.	.	.	.	.	.	.	.	.	6581.0	.	.
1137	01JUN85	.	.	.	.	.	.	.	.	.	.	6579.2	.	.
1138	02JUN85	.	.	.	.	.	.	.	.	.	.	6646.9	.	.
1139	03JUN85	2014	15.2	7.2	.	0.2	.	.	2	.	.	6665.7	.	.
1140	04JUN85	.	.	.	.	.	.	.	.	.	.	6681.9	.	.
1141	05JUN85	.	.	.	.	.	.	.	.	.	.	6688.3	.	.
1142	06JUN85	.	.	.	.	.	.	.	.	.	.	6692.8	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1143	07JUN85	.	.	.	.	.	.	.	.	.	.	6697.6	.	.
1144	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.0	.	.
1145	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.5	.	.
1146	10JUN85	1989	15.0	7.2	.	0.2	.	.	5	.	.	6704.7	.	.
1147	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.6	.	.
1148	12JUN85	.	.	.	.	.	.	.	.	.	.	6707.9	.	.
1149	13JUN85	.	.	.	.	.	.	.	.	.	.	6709.1	.	.
1150	18JUN85	1943	15.5	7.4	.	0.2	1.2	-1	3	-0.1	12	.	.	.
1151	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.4	.	.
1152	20JUN85	2064	15.0	7.3	.	0.3	1.0	-1	4	-0.1	22	.	.	.
1153	25JUN85	2058	14.3	7.3	.	-0.1	1.0	-1	3	-0.1	15	.	.	.
1154	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.6	.	.
1155	28JUN85	2110	14.7	7.2	.	0.3	.	-1	4	-0.1	14	.	.	.
1156	02JUL85	1845	14.8	7.5	356	0.1	.	.	4	.	3	.	.	.
1157	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.5	.	.
1158	05JUL85	2079	16.0	7.3	480	0.1	.	.	4	.	33	.	.	.
1159	09JUL85	2063	15.4	7.3	508	0.1	0.8	-1	-1	.	17	.	.	.
1160	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.2	.	.
1161	14JUL85	2154	15.0	7.4	496	0.8	0.6	.	4	-0.1	10	.	.	.
1162	16JUL85	2132	14.4	7.3	480	0.2	0.7	-1	4	-0.1	42	.	.	.
1163	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
1164	19JUL85	1992	14.4	7.2	480	0.3	0.5	-1	2	-0.1	32	.	.	.
1165	24JUL85	2424	14.7	7.3	480	0.3	0.5	-1	2	-0.1	10	.	.	.
1166	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.5	.	.
1167	27JUL85	2175	14.9	7.2	464	0.4	0.5	-1	3	-0.1	15	.	.	.
1168	30JUL85	2191	14.8	7.2	488	0.7	0.5	-1	1	-0.1	18	.	.	.
1169	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.8	.	.
1170	02AUG85	2160	15.2	7.2	472	0.3	0.5	-1	2	-0.1	-1	.	.	.
1171	06AUG85	2204	15.0	7.2	472	0.2	0.6	-1	1	-0.1	-1	.	.	.
1172	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.0	.	.
1173	10AUG85	2263	15.0	7.2	480	0.2	0.6	-1	2	-0.1	5	.	.	.
1174	13AUG85	2199	15.0	7.3	480	0.2	0.6	-1	2	-0.1	8	.	.	.
1175	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.8	.	.
1176	16AUG85	2268	15.2	7.2	512	0.2	0.6	-1	2	-0.1	2	.	.	.
1177	20AUG85	2106	15.2	7.1	508	0.2	0.6	.	3	-0.1	12	.	.	.
1178	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
1179	23AUG85	2175	15.1	7.2	412	0.3	0.6	-1	2	-0.1	30	.	.	.
1180	28AUG85	2083	15.1	7.2	612	0.4	0.6	-1	1	-0.1	5	6726.5	.	.
1181	04SEP85	2181	15.5	7.2	480	0.3	0.8	-1	2	-0.1	15	6726.9	.	.
1182	11SEP85	2160	14.8	7.2	492	0.1	0.6	.	2	.	-1	.	.	.
1183	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
1184	18SEP85	2234	15.2	7.2	516	-0.1	0.7	.	3	.	10	6727.7	.	.
1185	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
1186	28SEP85	2300	14.8	7.2	80	0.2	0.7	.	2	.	15	.	.	.
1187	01OCT85	.	.	.	.	.	.	.	.	.	.	6725.3	.	.
1188	02OCT85	.	.	.	.	.	.	.	.	.	.	6726.3	.	.
1189	03OCT85	2193	15.3	7.1	460	0.3	0.7	.	2	.	15	6726.7	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1190	04OCT85	.	.	.	.	.	.	.	.	.	.	6726.9	.	.
1191	05OCT85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
1192	06OCT85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
1193	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
1194	12OCT85	2295	15.2	7.3	460	0.7	0.7	.	2	.	15	.	.	.
1195	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
1196	18OCT85	2232	15.3	7.2	464	0.1	0.7	.	2	.	15	.	.	.
1197	23OCT85	2318	15.0	7.5	464	0.3	0.7	.	9	.	15	.	.	.
1198	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
1199	01NOV85	2540	15.4	7.2	372	0.6	1.0	.	36	.	-1	6728.8	.	.
1200	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
1201	08NOV85	2503	15.0	7.2	380	0.5	1.0	.	4	.	10	.	.	.
1202	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
1203	16NOV85	2510	15.0	7.3	340	0.8	1.0	.	40	.	25	.	.	.
1204	22NOV85	2378	15.0	7.2	408	0.3	0.9	.	24	.	5	6729.1	.	.
1205	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
1206	29NOV85	2470	14.5	7.2	332	0.4	1.2	.	48	.	20	.	.	.
1207	04DEC85	2631	15.0	7.3	280	0.6	1.2	.	48	.	12	6729.0	.	.
1208	11DEC85	1970	15.0	7.1	308	0.5	1.0	.	39	.	22	.	.	.
1209	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
1210	17DEC85	2327	15.4	7.1	320	.	1.0	.	36	.	18	.	.	.
1211	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
1212	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
1213	26DEC85	2163	15.5	7.1	248	0.5	0.8	.	24	.	14	.	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-2B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1214	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
1215	03JAN85	3126	15.0	7.1	.	.	1.2	-1	3	-0.1	20	.	.	.
1216	07JAN85	3110	15.5	7.2	.	.	1.2	-1	3	0.1	22	.	.	.
1217	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.7	.	.
1218	14JAN85	3080	15.5	7.2	.	-1	1.4	-1	3	-0.1	21	.	.	.
1219	16JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
1220	21JAN85	3231	15.4	7.2	.	-1	1.5	-1	4	-0.1	22	.	.	.
1221	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
1222	28JAN85	2964	.	7.1	.	-1	1.5	-1	4	0.1	21	.	.	.
1223	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
1224	04FEB85	3187	15.5	7.1	.	-1	1.5	-1	3	-0.1	19	.	.	.
1225	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
1226	11FEB85	3114	16.3	7.1	.	-1	1.8	-1	3	0.1	21	.	.	.
1227	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
1228	18FEB85	3192	16.1	7.0	.	-1	1.7	-1	3	-0.1	5	.	.	.
1229	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
1230	25FEB85	2911	15.7	7.0	.	-1	1.4	-1	3	0.1	25	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1231	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
1232	04MAR85	3097	15.0	7.0	.	-1.0	1.6	-1	3	0.1	10	.	.	.
1233	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
1234	11MAR85	3210	15.9	7.2	.	-1.0	1.5	-1	3	-0.1	15	.	.	.
1235	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.9	.	.
1236	18MAR85	3165	16.0	7.1	.	-1.0	1.1	-1	3	-0.1	12	.	.	.
1237	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.0	.	.
1238	25MAR85	2990	16.0	7.0	.	-1.0	1.2	-1	4	-0.1	12	.	.	.
1239	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.6	.	.
1240	01APR85	3326	15.7	7.0	.	-1.0	1.3	-1	3	-0.1	10	.	.	.
1241	08APR85	3310	16.0	7.0	.	-1.0	1.2	-1	3	-0.1	18	.	.	.
1242	09APR85	.	.	.	.	.	.	.	.	.	.	6721.4	.	.
1243	15APR85	3427	16.2	7.1	.	-1.0	1.1	-1	3	0.1	20	.	.	.
1244	18APR85	.	.	.	.	.	.	.	.	.	.	6723.2	.	.
1245	23APR85	3336	15.5	7.2	514	-1.0	1.1	-1	3	0.2	15	.	.	.
1246	25APR85	.	.	.	.	.	.	.	.	.	.	6724.6	.	.
1247	29APR85	3350	15.8	7.1	554	-1.0	1.1	-1	4	0.1	15	.	.	.
1248	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.4	.	.
1249	06MAY85	3468	15.9	7.1	492	-1.0	1.2	-1	3	-0.1	25	.	.	.
1250	08MAY85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
1251	13MAY85	3124	16.1	7.1	512	-1.0	0.9	-1	3	0.1	18	.	.	.
1252	15MAY85	.	.	.	.	.	.	.	.	.	.	6705.4	.	.
1253	16MAY85	.	.	.	.	.	.	.	.	.	.	6672.7	.	.
1254	17MAY85	.	.	.	.	.	.	.	.	.	.	6648.9	.	.
1255	18MAY85	.	.	.	.	.	.	.	.	.	.	6644.4	.	.
1256	19MAY85	.	.	.	.	.	.	.	.	.	.	6628.6	.	.
1257	20MAY85	2984	16.5	7.4	.	-1.0	.	.	4	.	.	6620.7	.	.
1258	21MAY85	.	.	.	.	.	.	.	.	.	.	6623.5	.	.
1259	22MAY85	3178	16.7	7.1	.	-1.0	.	.	3	.	.	6641.5	.	.
1260	23MAY85	.	.	.	.	.	.	.	.	.	.	6647.0	.	.
1261	24MAY85	.	.	.	.	.	.	.	.	.	.	6609.4	.	.
1262	25MAY85	.	.	.	.	.	.	.	.	.	.	6597.9	.	.
1263	26MAY85	.	.	.	.	.	.	.	.	.	.	6588.3	.	.
1264	27MAY85	.	.	.	.	.	.	.	.	.	.	6580.4	.	.
1265	28MAY85	2127	18.0	7.3	.	1.2	.	.	2	.	.	6586.3	.	.
1266	29MAY85	.	.	.	.	.	.	.	.	.	.	6573.7	.	.
1267	30MAY85	2190	16.4	7.3	522	-1.0	1.5	-1	2	0.1	20	6562.5	.	.
1268	31MAY85	.	.	.	.	.	.	.	.	.	.	6553.9	.	.
1269	01JUN85	.	.	.	.	.	.	.	.	.	.	6551.1	.	.
1270	02JUN85	.	.	.	.	.	.	.	.	.	.	6648.7	.	.
1271	03JUN85	2125	16.4	7.2	.	0.4	.	.	2	.	.	6666.6	.	.
1272	04JUN85	.	.	.	.	.	.	.	.	.	.	6682.1	.	.
1273	05JUN85	.	.	.	.	.	.	.	.	.	.	6688.3	.	.
1274	06JUN85	.	.	.	.	.	.	.	.	.	.	6692.8	.	.
1275	07JUN85	.	.	.	.	.	.	.	.	.	.	6697.7	.	.
1276	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.0	.	.
1277	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.5	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1278	10JUN85	2142	16.1	7.2	.	0.2	.	.	3	.	.	6704.5	.	.
1279	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.3	.	.
1280	12JUN85	.	.	.	.	.	.	.	.	.	.	6706.9	.	.
1281	13JUN85	.	.	.	.	.	.	.	.	.	.	6708.8	.	.
1282	18JUN85	2277	17.6	7.3	.	0.3	1.4	-1	1	-0.1	8	.	.	.
1283	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.2	.	.
1284	20JUN85	2400	16.0	7.2	.	0.4	1.2	-1	1	-0.1	26	.	.	.
1285	25JUN85	2470	15.2	7.2	.	0.1	1.3	-1	1	-0.1	12	.	.	.
1286	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
1287	28JUN85	2555	16.3	7.2	.	0.3	.	-1	2	-0.1	14	.	.	.
1288	02JUL85	2438	15.9	7.4	484	0.2	.	.	1	.	9	.	.	.
1289	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.2	.	.
1290	05JUL85	2383	16.5	7.2	492	0.2	.	.	1	.	35	.	.	.
1291	09JUL85	2387	15.7	7.2	508	0.2	0.9	-1	-1	.	14	.	.	.
1292	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.0	.	.
1293	14JUL85	2522	15.0	7.3	492	0.8	0.9	.	2	-0.1	20	.	.	.
1294	16JUL85	2499	15.5	7.2	500	0.2	1.0	-1	-1	-0.1	21	.	.	.
1295	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.0	.	.
1296	19JUL85	2440	15.1	7.4	484	0.3	0.7	-1	-1	-0.1	30	.	.	.
1297	24JUL85	2624	15.3	7.2	512	0.3	0.8	-1	-1	-0.1	10	.	.	.
1298	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.2	.	.
1299	27JUL85	2530	15.2	7.2	508	0.5	0.7	-1	-1	-0.1	12	.	.	.
1300	30JUL85	2490	15.3	7.2	512	0.7	0.7	-1	-1	-0.1	10	.	.	.
1301	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.6	.	.
1302	02AUG85	2427	15.6	7.2	516	0.4	0.8	-1	-1	-0.1	-1	.	.	.
1303	06AUG85	2563	15.1	7.2	436	0.7	0.8	-1	-1	-0.1	-1	.	.	.
1304	07AUG85	.	.	.	.	.	.	.	.	.	.	6724.7	.	.
1305	10AUG85	2572	15.4	7.2	504	0.5	0.8	-1	-1	-0.1	3	.	.	.
1306	13AUG85	2544	15.5	7.2	500	0.3	0.8	-1	-1	-0.1	7	.	.	.
1307	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
1308	16AUG85	2556	15.9	7.3	492	0.3	0.8	-1	-1	-0.1	-1	.	.	.
1309	20AUG85	2631	15.7	7.1	556	0.3	0.9	.	-1	-0.1	15	.	.	.
1310	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.2	.	.
1311	23AUG85	2480	15.1	7.1	516	0.4	0.8	-1	-1	-0.1	22	.	.	.
1312	28AUG85	2480	15.6	7.3	504	0.5	0.8	-1	-1	-0.1	-1	6726.3	.	.
1313	04SEP85	2673	16.0	7.2	500	0.3	1.0	-1	-1	-0.1	12	6726.8	.	.
1314	11SEP85	2600	15.0	7.2	508	0.2	0.8	.	-1	.	12	.	.	.
1315	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
1316	18SEP85	2550	15.3	7.1	524	0.2	0.9	.	-1	.	10	6727.5	.	.
1317	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
1318	28SEP85	2600	14.7	7.2	500	0.2	0.9	.	-1	.	15	.	.	.
1319	01OCT85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
1320	02OCT85	.	.	.	.	.	.	.	.	.	.	6726.2	.	.
1321	03OCT85	2468	15.0	7.1	500	0.4	0.9	.	-1	.	10	6726.7	.	.
1322	04OCT85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
1323	05OCT85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
1324	06OCT85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1325	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
1326	12OCT85	2703	15.3	7.3	508	1.9	0.9	.	-1	.	11	.	.	.
1327	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
1328	18OCT85	2747	15.0	7.2	504	0.8	0.9	.	-1	.	25	.	.	.
1329	23OCT85	2750	14.7	7.4	488	0.3	0.9	.	1	.	12	.	.	.
1330	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
1331	01NOV85	2360	14.0	7.4	480	0.4	0.9	.	2	.	20	6728.7	.	.
1332	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
1333	08NOV85	2688	14.8	7.2	508	0.2	0.9	.	2	.	5	.	.	.
1334	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
1335	16NOV85	2733	14.9	7.3	496	0.4	0.9	.	1	.	25	.	.	.
1336	22NOV85	2721	14.8	7.2	488	0.2	0.8	.	1	.	5	6729.0	.	.
1337	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
1338	29NOV85	2777	17.5	7.1	504	0.2	0.9	.	2	.	5	.	.	.
1339	04DEC85	2747	15.2	7.5	496	0.2	0.9	.	2	.	12	6728.8	.	.
1340	11DEC85	2194	14.2	7.2	488	0.2	0.9	.	2	.	22	.	.	.
1341	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
1342	17DEC85	2557	14.9	7.2	500	.	0.9	.	2	.	18	.	.	.
1343	19DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
1344	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
1345	26DEC85	2374	15.0	7.0	496	0.3	0.9	.	1	.	18	.	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-2C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1346	02JAN85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
1347	03JAN85	1538	18.3	7.5	.	.	1.7	-1	2	-0.1	25	.	.	.
1348	07JAN85	1540	18.4	7.6	.	.	1.5	-1	2	-0.1	25	.	.	.
1349	09JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
1350	14JAN85	1500	18.7	7.6	.	-1	1.8	-1	2	-0.1	30	.	.	.
1351	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
1352	21JAN85	1467	18.3	7.6	.	-1	1.9	-1	2	-0.1	25	.	.	.
1353	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
1354	28JAN85	1581	.	7.4	.	-1	1.9	-1	3	-0.1	24	.	.	.
1355	30JAN85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
1356	04FEB85	1544	18.1	7.6	.	-1	1.8	-1	2	-0.1	19	.	.	.
1357	06FEB85	.	.	.	.	.	.	.	.	.	.	6716.5	.	.
1358	11FEB85	1612	19.4	7.6	.	-1	2.3	-1	2	-0.1	25	.	.	.
1359	13FEB85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
1360	18FEB85	1575	19.2	7.5	.	-1	1.9	-1	2	-0.1	8	.	.	.
1361	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
1362	25FEB85	1509	19.0	7.5	.	-1	1.8	-1	2	-0.1	20	.	.	.
1363	27FEB85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.
1364	04MAR85	1543	17.5	7.4	.	-1	1.8	-1	2	-0.1	.	.	.	.
1365	06MAR85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1366	11MAR85	1572	19.2	7.5	.	-1.0	1.7	-1	3	-0.1	20	.	.	.
1367	14MAR85	.	.	.	.	.	.	.	.	.	.	6717.5	.	.
1368	18MAR85	1610	19.1	7.5	.	-1.0	1.5	-1	2	-0.1	22	.	.	.
1369	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.7	.	.
1370	25MAR85	1569	18.6	7.4	.	-1.0	1.7	-1	2	-0.1	20	.	.	.
1371	28MAR85	.	.	.	.	.	.	.	.	.	.	6720.3	.	.
1372	01APR85	1529	19.4	7.4	.	-1.0	1.8	-1	2	-0.1	15	.	.	.
1373	08APR85	1600	19.1	7.5	.	-1.0	1.6	-1	2	-0.1	45	.	.	.
1374	09APR85	.	.	.	.	.	.	.	.	.	.	6722.0	.	.
1375	15APR85	1613	19.0	7.6	.	-1.0	1.6	-1	2	-0.1	25	.	.	.
1376	18APR85	.	.	.	.	.	.	.	.	.	.	6723.8	.	.
1377	23APR85	1623	18.7	7.6	568	-1.0	1.6	-1	2	-0.1	18	.	.	.
1378	25APR85	.	.	.	.	.	.	.	.	.	.	6725.3	.	.
1379	29APR85	1571	19.3	7.5	560	-1.0	1.5	-1	2	-0.1	18	.	.	.
1380	01MAY85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
1381	06MAY85	1642	18.7	7.5	564	-1.0	1.7	-1	2	-0.1	28	.	.	.
1382	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
1383	13MAY85	1775	19.1	7.8	564	-1.0	1.2	-1	2	-0.1	20	.	.	.
1384	15MAY85	.	.	.	.	.	.	.	.	.	.	6705.9	.	.
1385	16MAY85	.	.	.	.	.	.	.	.	.	.	6675.0	.	.
1386	17MAY85	.	.	.	.	.	.	.	.	.	.	6648.0	.	.
1387	18MAY85	.	.	.	.	.	.	.	.	.	.	6643.5	.	.
1388	19MAY85	.	.	.	.	.	.	.	.	.	.	6626.8	.	.
1389	20MAY85	1595	20.4	7.9	.	-1.0	.	.	3	.	.	6619.6	.	.
1390	21MAY85	.	.	.	.	.	.	.	.	.	.	6622.6	.	.
1391	22MAY85	.	.	.	.	.	.	.	.	.	.	6642.1	.	.
1392	23MAY85	.	.	.	.	.	.	.	.	.	.	6647.7	.	.
1393	24MAY85	.	.	.	.	.	.	.	.	.	.	6610.9	.	.
1394	25MAY85	.	.	.	.	.	.	.	.	.	.	6599.5	.	.
1395	26MAY85	.	.	.	.	.	.	.	.	.	.	6589.6	.	.
1396	27MAY85	.	.	.	.	.	.	.	.	.	.	6581.7	.	.
1397	28MAY85	1538	19.5	7.6	.	1.5	.	.	4	.	.	6587.2	.	.
1398	29MAY85	.	.	.	.	.	.	.	.	.	.	6574.6	.	.
1399	30MAY85	1575	19.0	7.7	534	-1.0	1.6	-1	4	-0.1	22	6563.8	.	.
1400	31MAY85	.	.	.	.	.	.	.	.	.	.	6555.0	.	.
1401	01JUN85	.	.	.	.	.	.	.	.	.	.	6552.3	.	.
1402	02JUN85	.	.	.	.	.	.	.	.	.	.	6649.5	.	.
1403	03JUN85	1518	19.6	7.6	.	0.5	.	.	3	.	.	6667.4	.	.
1404	04JUN85	.	.	.	.	.	.	.	.	.	.	6683.1	.	.
1405	05JUN85	.	.	.	.	.	.	.	.	.	.	6689.3	.	.
1406	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.6	.	.
1407	07JUN85	.	.	.	.	.	.	.	.	.	.	6698.5	.	.
1408	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.7	.	.
1409	09JUN85	.	.	.	.	.	.	.	.	.	.	6704.1	.	.
1410	10JUN85	1530	19.3	7.7	.	0.3	.	.	4	.	.	6705.2	.	.
1411	11JUN85	.	.	.	.	.	.	.	.	.	.	6707.1	.	.
1412	12JUN85	.	.	.	.	.	.	.	.	.	.	6708.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1413	13JUN85	.	.	.	.	.	.	.	.	.	.	6709.6	.	.
1414	19JUN85	1310	19.9	7.8	.	0.4	2.1	-1	2	-0.1	18	6714.0	.	.
1415	20JUN85	1680	19.0	7.7	.	0.4	1.5	-1	2	-0.1	18	.	.	.
1416	25JUN85	1595	19.2	7.8	.	0.2	1.4	-1	2	-0.1	15	.	.	.
1417	26JUN85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
1418	28JUN85	1649	19.5	7.7	.	0.4	.	-1	3	-0.1	15	.	.	.
1419	02JUL85	1589	19.4	7.8	476	0.3	.	.	2	.	6	.	.	.
1420	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.9	.	.
1421	05JUL85	1609	19.5	7.7	464	0.3	.	.	2	.	17	.	.	.
1422	08JUL85	1589	20.2	7.7	512	0.3	1.2	-1	-1	.	12	.	.	.
1423	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.7	.	.
1424	14JUL85	1576	18.0	7.8	508	0.9	1.0	.	3	-0.1	-1	.	.	.
1425	16JUL85	1640	18.8	7.8	450	0.2	1.1	-1	2	-0.1	14	.	.	.
1426	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.7	.	.
1427	19JUL85	1693	17.6	7.8	488	0.4	0.9	-1	2	-0.1	30	.	.	.
1428	24JUL85	1760	16.7	7.7	504	0.3	0.8	-1	2	-0.1	11	.	.	.
1429	25JUL85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
1430	27JUL85	1669	18.3	7.8	512	0.5	0.9	-1	1	-0.1	20	.	.	.
1431	30JUL85	1643	18.4	7.8	524	0.6	0.8	-1	1	-0.1	15	.	.	.
1432	31JUL85	.	.	.	.	.	.	.	.	.	.	6724.2	.	.
1433	02AUG85	1650	18.6	7.8	560	0.4	0.9	-1	2	-0.1	-1	.	.	.
1434	06AUG85	1691	17.6	7.7	456	0.6	0.9	-1	1	-0.1	-1	.	.	.
1435	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.4	.	.
1436	10AUG85	1663	18.5	7.8	504	0.4	0.9	-1	3	-0.1	3	.	.	.
1437	13AUG85	1703	18.1	7.8	496	0.3	0.9	-1	1	-0.1	16	.	.	.
1438	14AUG85	.	.	.	.	.	.	.	.	.	.	6726.3	.	.
1439	16AUG85	1625	18.8	7.7	512	0.3	0.9	-1	1	-0.1	2	.	.	.
1440	20AUG85	1619	19.0	7.6	520	0.3	0.9	.	1	-0.1	12	.	.	.
1441	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.9	.	.
1442	23AUG85	1509	18.5	7.7	540	0.5	0.9	-1	1	-0.1	-1	.	.	.
1443	28AUG85	1686	18.7	7.8	516	0.7	0.9	-1	1	-0.1	5	6727.0	.	.
1444	04SEP85	1762	17.5	7.8	492	0.4	1.2	-1	3	-0.1	23	6727.5	.	.
1445	11SEP85	1720	18.1	7.6	512	0.2	0.9	.	-1	.	12	.	.	.
1446	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
1447	18SEP85	1617	18.0	7.7	524	0.2	1.0	.	2	.	12	6728.3	.	.
1448	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
1449	28SEP85	1550	17.6	7.8	504	0.3	1.0	.	-1	.	22	.	.	.
1450	010CT85	.	.	.	.	.	.	.	.	.	.	6725.8	.	.
1451	020CT85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
1452	030CT85	1632	18.9	7.7	520	0.4	1.0	.	-1	.	15	6727.4	.	.
1453	040CT85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
1454	050CT85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
1455	060CT85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
1456	090CT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
1457	120CT85	1727	18.3	7.9	520	0.5	1.1	.	-1	.	11	.	.	.
1458	160CT85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
1459	180CT85	1745	17.9	7.8	520	0.1	1.0	.	-1	.	15	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1460	23OCT85	1656	16.1	7.8	516	0.3	1.1	.	4	.	28	.	.	.
1461	24OCT85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
1462	01NOV85	1707	19.3	8.0	512	0.4	1.1	.	3	.	22	6729.3	.	.
1463	03NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
1464	08NOV85	1706	18.2	7.9	504	0.3	1.0	.	3	.	10	.	.	.
1465	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.6	.	.
1466	16NOV85	1625	18.1	7.9	528	0.4	0.9	.	2	.	10	.	.	.
1467	22NOV85	1663	17.9	7.8	516	0.2	1.0	.	2	.	5	6729.7	.	.
1468	27NOV85	.	.	.	.	.	.	.	.	.	.	6730.0	.	.
1469	29NOV85	2670	14.0	7.8	520	0.2	1.1	.	2	.	18	.	.	.
1470	04DEC85	1778	18.4	8.0	512	0.2	1.0	.	2	.	18	6729.6	.	.
1471	11DEC85	1360	18.0	7.7	504	0.3	1.0	.	3	.	23	.	.	.
1472	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
1473	17DEC85	1613	18.8	7.8	524	.	1.1	.	2	.	22	.	.	.
1474	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
1475	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
1476	26DEC85	1533	19.0	7.6	508	0.4	1.0	.	2	.	22	.	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-2G

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1477	02JAN85	.	.	.	.	.	.	.	.	.	.	6712.3	.	.
1478	09JAN85	.	.	.	.	.	.	.	.	.	.	6712.5	.	.
1479	14JAN85	2000	16.9	7.5	.	2.1	3.3	-1	23	-0.1	22	.	.	.
1480	16JAN85	.	.	.	.	.	.	.	.	.	.	6712.8	.	.
1481	23JAN85	.	.	.	.	.	.	.	.	.	.	6712.8	.	.
1482	28JAN85	1798	.	7.3	.	-1.0	2.2	-1	2	-0.1	18	.	.	.
1483	30JAN85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
1484	04FEB85	2012	17.0	7.5	.	2.0	4.2	-1	30	-0.1	15	.	.	.
1485	06FEB85	.	.	.	.	.	.	.	.	.	.	6714.0	.	.
1486	11FEB85	2002	17.7	7.4	.	1.7	4.0	-1	16	-0.1	20	.	.	.
1487	13FEB85	.	.	.	.	.	.	.	.	.	.	6714.0	.	.
1488	18FEB85	2107	17.7	7.4	.	2.8	5.2	-1	37	-0.1	10	.	.	.
1489	21FEB85	.	.	.	.	.	.	.	.	.	.	6713.6	.	.
1490	25FEB85	1984	17.9	7.3	.	1.6	3.1	-1	14	-0.1	12	.	.	.
1491	27FEB85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
1492	04MAR85	1929	17.0	7.3	.	1.4	2.7	-1	14	-0.1	8	.	.	.
1493	06MAR85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
1494	11MAR85	1893	17.5	7.4	.	1.4	2.3	-1	11	-0.1	12	.	.	.
1495	14MAR85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
1496	18MAR85	2253	17.6	7.5	.	3.7	5.2	-1	47	-0.1	20	.	.	.
1497	20MAR85	.	.	.	.	.	.	.	.	.	.	6716.6	.	.
1498	25MAR85	1968	17.0	7.4	.	2.6	3.9	-1	28	-0.1	12	.	.	.
1499	28MAR85	.	.	.	.	.	.	.	.	.	.	6718.2	.	.
1500	01APR85	2200	17.3	7.3	.	3.7	5.2	-1	44	-0.1	12	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2G

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1501	08APR85	1880	17.8	7.4	.	-1.0	2.4	-1	8	-0.1	45	.	.	.
1502	09APR85	.	.	.	.	.	.	.	.	.	.	6720.0	.	.
1503	15APR85	2167	18.2	7.5	.	3.8	4.8	-1	42	-0.1	25	.	.	.
1504	18APR85	.	.	.	.	.	.	.	.	.	.	6721.8	.	.
1505	25APR85	.	.	.	.	.	.	.	.	.	.	6723.3	.	.
1506	29APR85	1984	17.4	7.4	512	1.6	2.8	-1	17	-0.1	32	.	.	.
1507	01MAY85	.	.	.	.	.	.	.	.	.	.	6724.1	.	.
1508	06MAY85	2030	17.7	7.4	516	2.1	4.0	-1	26	-0.1	32	.	.	.
1509	08MAY85	.	.	.	.	.	.	.	.	.	.	6725.7	.	.
1510	13MAY85	1817	18.4	7.4	516	-1.0	1.7	-1	5	-0.1	25	.	.	.
1511	15MAY85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
1512	16MAY85	.	.	.	.	.	.	.	.	.	.	6675.3	.	.
1513	17MAY85	.	.	.	.	.	.	.	.	.	.	6653.9	.	.
1514	18MAY85	.	.	.	.	.	.	.	.	.	.	6647.6	.	.
1515	19MAY85	.	.	.	.	.	.	.	.	.	.	6632.1	.	.
1516	20MAY85	1852	19.6	7.8	.	1.3	.	.	13	.	.	6620.4	.	.
1517	21MAY85	.	.	.	.	.	.	.	.	.	.	6625.0	.	.
1518	22MAY85	.	.	.	.	.	.	.	.	.	.	6639.5	.	.
1519	23MAY85	.	.	.	.	.	.	.	.	.	.	6645.3	.	.
1520	24MAY85	.	.	.	.	.	.	.	.	.	.	6609.0	.	.
1521	25MAY85	.	.	.	.	.	.	.	.	.	.	6597.2	.	.
1522	26MAY85	.	.	.	.	.	.	.	.	.	.	6587.1	.	.
1523	27MAY85	.	.	.	.	.	.	.	.	.	.	6579.0	.	.
1524	28MAY85	2306	19.5	7.7	.	8.6	.	.	46	.	.	6584.3	.	.
1525	29MAY85	.	.	.	.	.	.	.	.	.	.	6572.3	.	.
1526	30MAY85	1877	18.8	7.5	520	-1.0	3.5	-1	9	-0.1	15	6560.9	.	.
1527	31MAY85	.	.	.	.	.	.	.	.	.	.	6552.3	.	.
1528	01JUN85	.	.	.	.	.	.	.	.	.	.	6549.1	.	.
1529	02JUN85	.	.	.	.	.	.	.	.	.	.	6640.0	.	.
1530	03JUN85	2722	18.7	7.8	.	5.6	.	.	71	.	.	6660.9	.	.
1531	04JUN85	.	.	.	.	.	.	.	.	.	.	6677.9	.	.
1532	05JUN85	.	.	.	.	.	.	.	.	.	.	6684.8	.	.
1533	06JUN85	.	.	.	.	.	.	.	.	.	.	6689.7	.	.
1534	07JUN85	.	.	.	.	.	.	.	.	.	.	6694.8	.	.
1535	08JUN85	.	.	.	.	.	.	.	.	.	.	6698.5	.	.
1536	09JUN85	.	.	.	.	.	.	.	.	.	.	6701.1	.	.
1537	10JUN85	2244	18.5	7.6	.	1.9	.	.	42	.	.	6702.5	.	.
1538	11JUN85	.	.	.	.	.	.	.	.	.	.	6704.5	.	.
1539	12JUN85	.	.	.	.	.	.	.	.	.	.	6705.2	.	.
1540	13JUN85	.	.	.	.	.	.	.	.	.	.	6706.9	.	.
1541	18JUN85	2581	17.5	8.0	.	5.4	10.0	-1	94	-0.1	20	.	.	.
1542	19JUN85	.	.	.	.	.	.	.	.	.	.	6711.8	.	.
1543	20JUN85	3500	17.5	8.0	.	3.4	10.0	-1	90	-0.1	34	.	.	.
1544	25JUN85	2933	18.0	8.0	.	4.2	10.0	-1	82	-0.1	22	.	.	.
1545	26JUN85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
1546	28JUN85	2873	18.3	7.9	.	5.1	.	-1	71	-0.1	19	.	.	.
1547	02JUL85	2768	18.7	7.9	560	3.9	.	.	70	.	13	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2G

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1548	03JUL85	.	.	.	.	.	.	.	.	.	.	6717.3	.	.
1549	05JUL85	2550	19.0	7.8	496	3.4	.	.	60	.	26	.	.	.
1550	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.2	.	.
1551	14JUL85	2627	18.0	7.8	444	4.3	5.7	.	30	-0.1	35	.	.	.
1552	17JUL85	.	.	.	.	.	.	.	.	.	.	6720.2	.	.
1553	19JUL85	2560	18.1	7.7	512	2.8	4.8	-1	46	-0.1	30	.	.	.
1554	24JUL85	2802	18.1	7.8	560	4.0	6.0	-1	58	-0.1	15	.	.	.
1555	25JUL85	.	.	.	.	.	.	.	.	.	.	6721.7	.	.
1556	27JUL85	2480	18.5	7.8	448	1.8	4.1	-1	30	-0.1	14	.	.	.
1557	30JUL85	2141	19.0	7.7	520	1.2	2.8	-1	19	-0.1	18	.	.	.
1558	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
1559	02AUG85	2066	18.6	7.5	528	1.4	2.6	-1	13	-0.1	-1	.	.	.
1560	06AUG85	2368	18.8	7.7	528	2.8	3.5	-1	31	.	3	.	.	.
1561	07AUG85	.	.	.	.	.	.	.	.	.	.	6724.2	.	.
1562	10AUG85	2000	17.0	7.7	496	0.8	2.0	-1	5	-0.1	3	.	.	.
1563	13AUG85	2207	18.4	7.6	488	1.3	2.5	-1	16	-0.1	12	.	.	.
1564	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
1565	16AUG85	2420	18.7	7.7	532	2.3	3.7	-1	30	-0.1	3	.	.	.
1566	20AUG85	2074	18.8	7.5	512	1.2	2.5	.	13	-0.1	15	.	.	.
1567	21AUG85	.	.	.	.	.	.	.	.	.	.	6722.5	.	.
1568	23AUG85	2000	18.3	7.6	524	1.7	2.8	-1	12	-0.1	-1	.	.	.
1569	28AUG85	2083	18.5	7.8	524	1.9	3.1	-1	14	-0.1	-1	6725.8	.	.
1570	04SEP85	2054	18.5	7.5	500	0.6	2.3	-1	8	-0.1	19	6726.9	.	.
1571	11SEP85	1880	18.0	7.5	500	0.5	1.7	.	3	.	8	.	.	.
1572	12SEP85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
1573	18SEP85	1933	18.8	7.5	520	0.6	2.1	.	7	.	10	6727.2	.	.
1574	25SEP85	.	.	.	.	.	.	.	.	.	.	6726.9	.	.
1575	28SEP85	2020	18.0	7.6	484	0.5	1.9	.	5	.	22	.	.	.
1576	010CT85	.	.	.	.	.	.	.	.	.	.	6724.5	.	.
1577	020CT85	.	.	.	.	.	.	.	.	.	.	6725.8	.	.
1578	030CT85	1973	18.7	7.5	520	0.8	1.9	.	4	.	8	6726.3	.	.
1579	040CT85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
1580	050CT85	.	.	.	.	.	.	.	.	.	.	6726.9	.	.
1581	060CT85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
1582	090CT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
1583	120CT85	1981	18.4	7.7	528	0.9	2.1	.	4	.	20	.	.	.
1584	160CT85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
1585	180CT85	2221	18.4	7.7	504	0.9	2.6	.	8	.	15	.	.	.
1586	230CT85	.	17.5	.	.	.	.	.	.	.	.	.	.	.
1587	240CT85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
1588	01NOV85	2380	18.0	7.9	500	1.4	4.0	.	44	.	42	6728.4	.	.
1589	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
1590	08NOV85	2066	17.6	7.8	496	1.2	3.0	.	30	.	10	.	.	.
1591	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
1592	16NOV85	2235	17.8	7.9	528	1.8	3.0	.	34	.	25	.	.	.
1593	22NOV85	2108	17.3	7.7	516	1.1	2.8	.	24	.	12	6728.9	.	.
1594	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2G

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1595	29NOV85	1900	15.0	7.6	492	0.4	1.7	.	7	.	18	.	.	.
1596	04DEC85	3177	17.6	8.0	596	6.8	8.8	.	8	.	25	6728.9	.	.
1597	11DEC85	2633	17.3	8.1	572	6.7	9.0	.	118	.	33	.	.	.
1598	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
1599	17DEC85	2903	17.8	8.0	576	.	8.2	.	95	.	25	.	.	.
1600	19DEC85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
1601	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
1602	26DEC85	2163	17.5	7.5	516	3.0	5.0	.	53	.	20	.	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-2S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1603	02JAN85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
1604	09JAN85	.	.	.	.	.	.	.	.	.	.	6724.4	.	.
1605	16JAN85	.	.	.	.	.	.	.	.	.	.	6723.6	.	.
1606	23JAN85	.	.	.	.	.	.	.	.	.	.	6723.5	.	.
1607	30JAN85	.	.	.	.	.	.	.	.	.	.	6723.6	.	.
1608	06FEB85	.	.	.	.	.	.	.	.	.	.	6723.1	.	.
1609	13FEB85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
1610	21FEB85	.	.	.	.	.	.	.	.	.	.	6723.1	.	.
1611	27FEB85	.	.	.	.	.	.	.	.	.	.	6723.1	.	.
1612	06MAR85	.	.	.	.	.	.	.	.	.	.	6723.3	.	.
1613	14MAR85	.	.	.	.	.	.	.	.	.	.	6723.8	.	.
1614	20MAR85	.	.	.	.	.	.	.	.	.	.	6725.2	.	.
1615	28MAR85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
1616	09APR85	.	.	.	.	.	.	.	.	.	.	6725.8	.	.
1617	18APR85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
1618	25APR85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
1619	01MAY85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
1620	08MAY85	.	.	.	.	.	.	.	.	.	.	6729.8	.	.
1621	15MAY85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
1622	16MAY85	.	.	.	.	.	.	.	.	.	.	6720.4	.	.
1623	17MAY85	.	.	.	.	.	.	.	.	.	.	6718.2	.	.
1624	18MAY85	.	.	.	.	.	.	.	.	.	.	6717.3	.	.
1625	19MAY85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
1626	20MAY85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
1627	21MAY85	.	.	.	.	.	.	.	.	.	.	6714.7	.	.
1628	22MAY85	.	.	.	.	.	.	.	.	.	.	6714.3	.	.
1629	23MAY85	.	.	.	.	.	.	.	.	.	.	6714.1	.	.
1630	24MAY85	.	.	.	.	.	.	.	.	.	.	6713.7	.	.
1631	25MAY85	.	.	.	.	.	.	.	.	.	.	6713.4	.	.
1632	26MAY85	.	.	.	.	.	.	.	.	.	.	6713.1	.	.
1633	27MAY85	.	.	.	.	.	.	.	.	.	.	6713.4	.	.
1634	28MAY85	.	.	.	.	.	.	.	.	.	.	6713.4	.	.
1635	29MAY85	.	.	.	.	.	.	.	.	.	.	6713.2	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1636	30MAY85	.	.	.	.	.	.	.	.	.	.	6713.3	.	.
1637	31MAY85	.	.	.	.	.	.	.	.	.	.	6712.6	.	.
1638	01JUN85	.	.	.	.	.	.	.	.	.	.	6712.9	.	.
1639	02JUN85	.	.	.	.	.	.	.	.	.	.	6712.8	.	.
1640	03JUN85	.	.	.	.	.	.	.	.	.	.	6712.6	.	.
1641	04JUN85	.	.	.	.	.	.	.	.	.	.	6712.5	.	.
1642	05JUN85	.	.	.	.	.	.	.	.	.	.	6712.4	.	.
1643	06JUN85	.	.	.	.	.	.	.	.	.	.	6712.4	.	.
1644	07JUN85	.	.	.	.	.	.	.	.	.	.	6712.1	.	.
1645	08JUN85	.	.	.	.	.	.	.	.	.	.	6712.1	.	.
1646	09JUN85	.	.	.	.	.	.	.	.	.	.	6711.9	.	.
1647	10JUN85	.	.	.	.	.	.	.	.	.	.	6711.9	.	.
1648	11JUN85	.	.	.	.	.	.	.	.	.	.	6711.9	.	.
1649	12JUN85	.	.	.	.	.	.	.	.	.	.	6712.0	.	.
1650	13JUN85	.	.	.	.	.	.	.	.	.	.	6712.3	.	.
1651	19JUN85	.	.	.	.	.	.	.	.	.	.	6714.6	.	.
1652	26JUN85	.	.	.	.	.	.	.	.	.	.	6718.2	.	.
1653	03JUL85	.	.	.	.	.	.	.	.	.	.	6720.3	.	.
1654	11JUL85	.	.	.	.	.	.	.	.	.	.	6722.1	.	.
1655	17JUL85	.	.	.	.	.	.	.	.	.	.	6722.9	.	.
1656	25JUL85	.	.	.	.	.	.	.	.	.	.	6724.3	.	.
1657	31JUL85	.	.	.	.	.	.	.	.	.	.	6725.5	.	.
1658	07AUG85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
1659	14AUG85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
1660	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
1661	28AUG85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
1662	04SEP85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
1663	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
1664	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
1665	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
1666	010CT85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
1667	020CT85	.	.	.	.	.	.	.	.	.	.	6726.4	.	.
1668	030CT85	.	.	.	.	.	.	.	.	.	.	6726.9	.	.
1669	040CT85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
1670	050CT85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
1671	060CT85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
1672	090CT85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
1673	160CT85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
1674	240CT85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
1675	01NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
1676	03NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
1677	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
1678	22NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
1679	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.7	.	.
1680	04DEC85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
1681	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
1682	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-2S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1683	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-3A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1684	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.2	.	.
1685	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.3	.	.
1686	14JAN85	1750	11.4	7.4	.	-1.0	1.2	-1	1	-0.1	22	.	.	.
1687	16JAN85	.	.	.	.	.	.	.	.	.	.	6714.6	.	.
1688	23JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
1689	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
1690	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
1691	11FEB85	1868	11.9	7.3	.	-1.0	1.8	-1	1	-0.1	22	.	.	.
1692	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
1693	21FEB85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
1694	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
1695	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
1696	11MAR85	1782	11.8	7.3	.	-1.0	1.3	-1	-1	-0.1	10	.	.	.
1697	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.5	.	.
1698	20MAR85	.	.	.	.	.	.	.	.	.	.	6717.6	.	.
1699	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.3	.	.
1700	09APR85	.	.	.	.	.	.	.	.	.	.	6721.0	.	.
1701	15APR85	1814	12.1	7.3	.	-1.0	1.0	-1	2	-0.1	20	.	.	.
1702	18APR85	.	.	.	.	.	.	.	.	.	.	6722.8	.	.
1703	25APR85	.	.	.	.	.	.	.	.	.	.	6724.2	.	.
1704	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.0	.	.
1705	08MAY85	.	.	.	.	.	.	.	.	.	.	6726.4	.	.
1706	13MAY85	1785	11.7	7.2	458	-1.0	0.7	-1	-1	-0.1	20	.	.	.
1707	15MAY85	.	.	.	.	.	.	.	.	.	.	6710.1	.	.
1708	16MAY85	.	.	.	.	.	.	.	.	.	.	6681.0	.	.
1709	17MAY85	.	.	.	.	.	.	.	.	.	.	6661.2	.	.
1710	18MAY85	.	.	.	.	.	.	.	.	.	.	6655.4	.	.
1711	19MAY85	.	.	.	.	.	.	.	.	.	.	6641.7	.	.
1712	20MAY85	1749	12.3	7.6	.	-1.0	.	.	-1	.	.	6637.4	.	.
1713	21MAY85	.	.	.	.	.	.	.	.	.	.	6637.2	.	.
1714	22MAY85	.	.	.	.	.	.	.	.	.	.	6650.2	.	.
1715	23MAY85	.	.	.	.	.	.	.	.	.	.	6654.5	.	.
1716	24MAY85	.	.	.	.	.	.	.	.	.	.	6629.1	.	.
1717	25MAY85	.	.	.	.	.	.	.	.	.	.	6620.5	.	.
1718	26MAY85	.	.	.	.	.	.	.	.	.	.	6612.9	.	.
1719	27MAY85	.	.	.	.	.	.	.	.	.	.	6606.1	.	.
1720	28MAY85	1691	12.8	7.2	.	-1.0	.	.	1	.	.	6608.7	.	.
1721	29MAY85	.	.	.	.	.	.	.	.	.	.	6600.6	.	.
1722	30MAY85	1585	12.4	7.3	432	-1.0	1.1	-1	-1	-0.1	22	6592.9	.	.
1723	31MAY85	.	.	.	.	.	.	.	.	.	.	6587.0	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-3A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1724	01JUN85	.	.	.	.	.	.	.	.	.	.	6585.3	.	.
1725	02JUN85	.	.	.	.	.	.	.	.	.	.	6651.2	.	.
1726	03JUN85	1720	12.7	7.3	.	0.3	.	.	2	.	.	6668.5	.	.
1727	04JUN85	.	.	.	.	.	.	.	.	.	.	6683.0	.	.
1728	05JUN85	.	.	.	.	.	.	.	.	.	.	6689.1	.	.
1729	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.4	.	.
1730	07JUN85	.	.	.	.	.	.	.	.	.	.	6697.7	.	.
1731	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.0	.	.
1732	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.5	.	.
1733	10JUN85	1652	12.3	7.3	.	0.2	.	.	3	.	.	6704.7	.	.
1734	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.4	.	.
1735	12JUN85	.	.	.	.	.	.	.	.	.	.	6707.7	.	.
1736	13JUN85	.	.	.	.	.	.	.	.	.	.	6706.5	.	.
1737	18JUN85	1822	12.1	7.4	.	0.2	1.4	-1	3	-0.1	12	.	.	.
1738	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.1	.	.
1739	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.2	.	.
1740	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.1	.	.
1741	11JUL85	.	.	.	.	.	.	.	.	.	.	6719.8	.	.
1742	17JUL85	.	.	.	.	.	.	.	.	.	.	6720.9	.	.
1743	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.2	.	.
1744	27JUL85	2074	12.1	7.4	424	0.3	0.8	-1	-1	-0.1	15	.	.	.
1745	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.5	.	.
1746	07AUG85	.	.	.	.	.	.	.	.	.	.	6724.7	.	.
1747	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.5	.	.
1748	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.2	.	.
1749	23AUG85	1895	12.1	7.4	440	0.3	0.7	-1	-1	-0.1	-1	.	.	.
1750	28AUG85	.	.	.	.	.	.	.	.	.	.	6726.3	.	.
1751	04SEP85	.	.	.	.	.	.	.	.	.	.	6726.7	.	.
1752	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
1753	17SEP85	1872	12.0	7.2	456	-0.1	0.6	.	-1	.	8	.	.	.
1754	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
1755	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
1756	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
1757	12OCT85	2024	11.5	7.5	444	0.3	0.7	.	-1	.	20	.	.	.
1758	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
1759	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
1760	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
1761	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
1762	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
1763	16NOV85	1930	11.5	7.6	440	0.2	0.6	.	2	.	15	.	.	.
1764	22NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
1765	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
1766	04DEC85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
1767	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
1768	17DEC85	1993	11.3	7.4	440	.	0.8	.	2	.	22	.	.	.
1769	19DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
1770	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-3B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1771	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.
1772	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.7	.	.
1773	14JAN85	2015	12.8	7.5	.	-1	1.7	-1	1	-0.1	20	.	.	.
1774	16JAN85	.	.	.	.	.	.	.	.	.	.	6714.8	.	.
1775	21JAN85	2056	11.9	7.5	.	-1	2.4	-1	2	-0.1	19	.	.	.
1776	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
1777	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
1778	04FEB85	1902	13.0	7.4	.	-1	2.0	-1	2	-0.1	12	.	.	.
1779	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
1780	11FEB85	2002	13.4	7.4	.	-1	2.7	-1	1	-0.1	20	.	.	.
1781	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
1782	18FEB85	2022	13.6	7.3	.	-1	2.4	-1	2	-0.1	8	.	.	.
1783	21FEB85	.	.	.	.	.	.	.	.	.	.	6714.8	.	.
1784	25FEB85	1940	13.5	7.3	.	-1	2.1	-1	2	-0.1	12	.	.	.
1785	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
1786	04MAR85	1984	12.0	7.3	.	-1	1.9	-1	3	-0.1	30	.	.	.
1787	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
1788	11MAR85	1993	13.1	7.4	.	-1	1.8	-1	2	-0.1	32	.	.	.
1789	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.7	.	.
1790	18MAR85	1974	13.1	7.4	.	-1	1.7	-1	3	-0.1	18	.	.	.
1791	20MAR85	.	.	.	.	.	.	.	.	.	.	6717.8	.	.
1792	25MAR85	1995	14.0	7.3	.	-1	1.8	-1	3	-0.1	15	.	.	.
1793	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.4	.	.
1794	01APR85	2039	13.1	7.3	.	-1	1.9	-1	3	-0.1	15	.	.	.
1795	08APR85	2010	13.4	7.4	.	-1	1.6	-1	2	-0.1	15	.	.	.
1796	09APR85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
1797	15APR85	2006	13.2	7.4	.	-1	1.6	-1	2	-0.1	20	.	.	.
1798	18APR85	.	.	.	.	.	.	.	.	.	.	6722.9	.	.
1799	23APR85	2026	13.0	7.5	504	-1	1.7	-1	2	-0.1	18	.	.	.
1800	25APR85	.	.	.	.	.	.	.	.	.	.	6724.4	.	.
1801	29APR85	2042	13.4	7.3	500	-1	1.6	-1	2	-0.1	18	.	.	.
1802	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.2	.	.
1803	06MAY85	2030	13.3	7.3	494	-1	1.8	-1	2	-0.1	20	.	.	.
1804	08MAY85	.	.	.	.	.	.	.	.	.	.	6726.6	.	.
1805	13MAY85	1901	13.1	7.4	504	-1	1.2	-1	2	-0.1	20	.	.	.
1806	15MAY85	.	.	.	.	.	.	.	.	.	.	6703.4	.	.
1807	16MAY85	.	.	.	.	.	.	.	.	.	.	6672.3	.	.
1808	17MAY85	.	.	.	.	.	.	.	.	.	.	6648.2	.	.
1809	18MAY85	.	.	.	.	.	.	.	.	.	.	6642.5	.	.
1810	19MAY85	.	.	.	.	.	.	.	.	.	.	6625.5	.	.
1811	20MAY85	1955	13.6	7.7	.	-1	.	.	2	.	.	6615.8	.	.
1812	21MAY85	.	.	.	.	.	.	.	.	.	.	6623.7	.	.
1813	22MAY85	.	.	.	.	.	.	.	.	.	.	6643.1	.	.
1814	23MAY85	2723	14.2	7.1	436	-1	1.4	-1	2	-0.1	15	6646.9	.	.
1815	24MAY85	.	.	.	.	.	.	.	.	.	.	6613.6	.	.
1816	25MAY85	.	.	.	.	.	.	.	.	.	.	6603.4	.	.
1817	26MAY85	.	.	.	.	.	.	.	.	.	.	6594.0	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-3B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1818	27MAY85	.	.	.	.	.	.	.	.	.	.	6586.1	.	.
1819	28MAY85	2460	14.3	7.2	.	1.2	.	.	1	.	.	6591.3	.	.
1820	29MAY85	.	.	.	.	.	.	.	.	.	.	6579.3	.	.
1821	30MAY85	1982	14.0	7.5	494	-1.0	1.8	-1	1	-0.1	18	6568.6	.	.
1822	31MAY85	.	.	.	.	.	.	.	.	.	.	6560.1	.	.
1823	01JUN85	.	.	.	.	.	.	.	.	.	.	6557.8	.	.
1824	02JUN85	.	.	.	.	.	.	.	.	.	.	6650.1	.	.
1825	03JUN85	2429	14.0	7.3	.	0.4	.	.	1	.	.	6668.5	.	.
1826	04JUN85	.	.	.	.	.	.	.	.	.	.	6683.2	.	.
1827	05JUN85	.	.	.	.	.	.	.	.	.	.	6689.2	.	.
1828	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.6	.	.
1829	07JUN85	.	.	.	.	.	.	.	.	.	.	6698.0	.	.
1830	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.1	.	.
1831	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.5	.	.
1832	10JUN85	2142	13.9	7.3	.	0.2	.	.	2	.	.	6704.8	.	.
1833	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.5	.	.
1834	12JUN85	.	.	.	.	.	.	.	.	.	.	6707.8	.	.
1835	13JUN85	.	.	.	.	.	.	.	.	.	.	6708.8	.	.
1836	18JUN85	1923	14.3	7.4	.	0.3	1.8	-1	-1	-0.1	12	.	.	.
1837	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.3	.	.
1838	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.4	.	.
1839	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.4	.	.
1840	11JUL85	.	.	.	.	.	.	.	.	.	.	6719.8	.	.
1841	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.1	.	.
1842	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.4	.	.
1843	27JUL85	2024	13.7	7.4	472	0.5	0.9	-1	-1	-0.1	20	.	.	.
1844	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.7	.	.
1845	07AUG85	.	.	.	.	.	.	.	.	.	.	6724.8	.	.
1846	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
1847	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
1848	23AUG85	1975	13.6	7.4	464	0.4	1.1	-1	-1	-0.1	-1	.	.	.
1849	28AUG85	.	.	.	.	.	.	.	.	.	.	6726.4	.	.
1850	04SEP85	.	.	.	.	.	.	.	.	.	.	6726.9	.	.
1851	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
1852	17SEP85	1872	13.5	7.2	468	0.2	1.0	.	-1	.	8	.	.	.
1853	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
1854	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
1855	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
1856	12OCT85	2024	13.0	7.5	480	1.1	1.1	.	-1	.	28	.	.	.
1857	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
1858	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
1859	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
1860	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
1861	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
1862	16NOV85	2003	12.9	7.6	460	0.4	1.0	.	-1	.	10	.	.	.
1863	22NOV85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
1864	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-3B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1865	04DEC85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
1866	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
1867	17DEC85	1935	12.9	7.4	468	.	1.2	.	-1	.	22	.	.	.
1868	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
1869	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-3C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1870	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.7	.	.
1871	09JAN85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
1872	14JAN85	1470	13.2	8.1	.	-1.0	2.2	-1	-1	-0.1	60	.	.	.
1873	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
1874	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
1875	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
1876	06FEB85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.
1877	11FEB85	1501	13.7	7.9	.	-1.0	3.5	5	-1	0.1	42	.	.	.
1878	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
1879	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
1880	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
1881	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
1882	11MAR85	1450	13.1	8.1	.	-1.0	2.3	5	-1	-0.1	42	.	.	.
1883	14MAR85	.	.	.	.	.	.	.	.	.	.	6717.1	.	.
1884	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.2	.	.
1885	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.8	.	.
1886	09APR85	.	.	.	.	.	.	.	.	.	.	6721.6	.	.
1887	15APR85	1512	13.7	8.0	.	-1.0	2.1	-1	-1	-0.1	52	.	.	.
1888	18APR85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
1889	25APR85	.	.	.	.	.	.	.	.	.	.	6724.8	.	.
1890	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
1891	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
1892	13MAY85	1439	13.3	8.4	484	-1.0	1.6	2	-1	-0.1	45	.	.	.
1893	15MAY85	.	.	.	.	.	.	.	.	.	.	6703.3	.	.
1894	16MAY85	.	.	.	.	.	.	.	.	.	.	6670.8	.	.
1895	17MAY85	.	.	.	.	.	.	.	.	.	.	6644.9	.	.
1896	18MAY85	.	.	.	.	.	.	.	.	.	.	6639.2	.	.
1897	19MAY85	.	.	.	.	.	.	.	.	.	.	6621.2	.	.
1898	20MAY85	1358	14.3	8.1	.	-1.0	.	.	-1	.	.	6611.2	.	.
1899	21MAY85	.	.	.	.	.	.	.	.	.	.	6620.3	.	.
1900	22MAY85	.	.	.	.	.	.	.	.	.	.	6641.5	.	.
1901	23MAY85	1422	14.8	8.2	490	-1.0	1.9	5	4	-0.1	32	6646.4	.	.
1902	24MAY85	.	.	.	.	.	.	.	.	.	.	6611.5	.	.
1903	25MAY85	.	.	.	.	.	.	.	.	.	.	6601.0	.	.
1904	26MAY85	.	.	.	.	.	.	.	.	.	.	6591.1	.	.
1905	27MAY85	.	.	.	.	.	.	.	.	.	.	6583.0	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-3C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1906	28MAY85	1394	14.7	8.3	.	-1.0	.	.	-1	.	.	6588.6	.	.
1907	29MAY85	.	.	.	.	.	.	.	.	.	.	6576.0	.	.
1908	30MAY85	1392	14.5	7.9	492	-1.0	2.1	2	-1	0.1	5	6565.2	.	.
1909	31MAY85	.	.	.	.	.	.	.	.	.	.	6556.4	.	.
1910	01JUN85	.	.	.	.	.	.	.	.	.	.	6554.3	.	.
1911	02JUN85	.	.	.	.	.	.	.	.	.	.	6649.3	.	.
1912	03JUN85	1407	14.1	8.3	.	0.3	.	.	-1	.	.	6668.2	.	.
1913	04JUN85	.	.	.	.	.	.	.	.	.	.	6683.3	.	.
1914	05JUN85	.	.	.	.	.	.	.	.	.	.	6689.5	.	.
1915	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.7	.	.
1916	07JUN85	.	.	.	.	.	.	.	.	.	.	6698.2	.	.
1917	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.4	.	.
1918	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.9	.	.
1919	10JUN85	1428	14.4	8.2	.	0.1	.	.	1	.	.	6705.2	.	.
1920	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.8	.	.
1921	12JUN85	.	.	.	.	.	.	.	.	.	.	6708.2	.	.
1922	13JUN85	.	.	.	.	.	.	.	.	.	.	6707.9	.	.
1923	19JUN85	1512	14.9	8.3	.	0.5	2.8	-1	1	-0.1	15	6712.8	.	.
1924	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.6	.	.
1925	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.5	.	.
1926	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.1	.	.
1927	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
1928	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.5	.	.
1929	27JUL85	1670	13.9	8.1	476	0.5	1.4	-1	-1	-0.1	18	.	.	.
1930	31JUL85	.	.	.	.	.	.	.	.	.	.	6724.0	.	.
1931	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
1932	14AUG85	.	.	.	.	.	.	.	.	.	.	6726.0	.	.
1933	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.7	.	.
1934	23AUG85	1785	13.8	8.0	484	0.2	1.4	-1	-1	-0.1	-1	.	.	.
1935	28AUG85	.	.	.	.	.	.	.	.	.	.	6726.7	.	.
1936	04SEP85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
1937	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
1938	17SEP85	1669	14.0	7.9	480	0.1	1.4	.	-1	.	12	.	.	.
1939	18SEP85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
1940	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
1941	09OCT85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
1942	12OCT85	1663	13.4	8.2	480	0.4	1.5	.	-1	.	15	.	.	.
1943	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
1944	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
1945	01NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
1946	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
1947	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
1948	16NOV85	1632	13.5	8.2	488	0.4	1.3	.	-1	.	5	.	.	.
1949	22NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
1950	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.7	.	.
1951	04DEC85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
1952	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-3C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1953	17DEC85	1584	13.3	8.1	480	.	1.6	.	1	.	-1	.	.	.
1954	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
1955	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-3S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1956	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.2	.	.
1957	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
1958	16JAN85	.	.	.	.	.	.	.	.	.	.	6714.6	.	.
1959	23JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
1960	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
1961	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
1962	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
1963	21FEB85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
1964	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
1965	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
1966	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.6	.	.
1967	20MAR85	.	.	.	.	.	.	.	.	.	.	6717.8	.	.
1968	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.5	.	.
1969	09APR85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
1970	18APR85	.	.	.	.	.	.	.	.	.	.	6722.9	.	.
1971	25APR85	.	.	.	.	.	.	.	.	.	.	6724.4	.	.
1972	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.2	.	.
1973	08MAY85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
1974	15MAY85	.	.	.	.	.	.	.	.	.	.	6719.0	.	.
1975	16MAY85	.	.	.	.	.	.	.	.	.	.	6697.4	.	.
1976	17MAY85	.	.	.	.	.	.	.	.	.	.	6697.4	.	.
1977	18MAY85	.	.	.	.	.	.	.	.	.	.	6698.1	.	.
1978	19MAY85	.	.	.	.	.	.	.	.	.	.	6697.6	.	.
1979	20MAY85	.	.	.	.	.	.	.	.	.	.	6697.8	.	.
1980	21MAY85	.	.	.	.	.	.	.	.	.	.	6697.6	.	.
1981	22MAY85	.	.	.	.	.	.	.	.	.	.	6697.6	.	.
1982	23MAY85	.	.	.	.	.	.	.	.	.	.	6702.1	.	.
1983	24MAY85	.	.	.	.	.	.	.	.	.	.	6697.7	.	.
1984	25MAY85	.	.	.	.	.	.	.	.	.	.	6697.8	.	.
1985	26MAY85	.	.	.	.	.	.	.	.	.	.	6697.5	.	.
1986	27MAY85	.	.	.	.	.	.	.	.	.	.	6698.0	.	.
1987	28MAY85	.	.	.	.	.	.	.	.	.	.	6698.0	.	.
1988	29MAY85	.	.	.	.	.	.	.	.	.	.	6698.0	.	.
1989	30MAY85	.	.	.	.	.	.	.	.	.	.	6698.1	.	.
1990	31MAY85	.	.	.	.	.	.	.	.	.	.	6697.7	.	.
1991	01JUN85	.	.	.	.	.	.	.	.	.	.	6698.3	.	.
1992	02JUN85	.	.	.	.	.	.	.	.	.	.	6698.1	.	.
1993	03JUN85	.	.	.	.	.	.	.	.	.	.	6697.6	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-3S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
1994	04JUN85	.	.	.	.	.	.	.	.	.	.	6698.1	.	.
1995	05JUN85	.	.	.	.	.	.	.	.	.	.	6698.2	.	.
1996	06JUN85	.	.	.	.	.	.	.	.	.	.	6698.2	.	.
1997	07JUN85	.	.	.	.	.	.	.	.	.	.	6699.4	.	.
1998	08JUN85	.	.	.	.	.	.	.	.	.	.	6699.4	.	.
1999	09JUN85	.	.	.	.	.	.	.	.	.	.	6702.1	.	.
2000	10JUN85	.	.	.	.	.	.	.	.	.	.	6704.1	.	.
2001	11JUN85	.	.	.	.	.	.	.	.	.	.	6705.6	.	.
2002	12JUN85	.	.	.	.	.	.	.	.	.	.	6707.0	.	.
2003	13JUN85	.	.	.	.	.	.	.	.	.	.	6708.4	.	.
2004	19JUN85	.	.	.	.	.	.	.	.	.	.	6712.8	.	.
2005	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.
2006	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.0	.	.
2007	11JUL85	.	.	.	.	.	.	.	.	.	.	6719.8	.	.
2008	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.0	.	.
2009	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.2	.	.
2010	31JUL85	.	.	.	.	.	.	.	.	.	.	6722.8	.	.
2011	07AUG85	.	.	.	.	.	.	.	.	.	.	6724.7	.	.
2012	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.5	.	.
2013	21AUG85	.	.	.	.	.	.	.	.	.	.	6722.7	.	.
2014	28AUG85	.	.	.	.	.	.	.	.	.	.	6726.2	.	.
2015	04SEP85	.	.	.	.	.	.	.	.	.	.	6726.6	.	.
2016	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
2017	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
2018	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
2019	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
2020	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
2021	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
2022	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
2023	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
2024	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
2025	22NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
2026	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
2027	04DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
2028	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
2029	19DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
2030	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-4A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2031	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.2	.	.
2032	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.6	.	.
2033	14JAN85	1600	10.7	7.4	.	-1	1.0	-1	-1	-0.1	25	.	.	.
2034	16JAN85	.	.	.	.	.	.	.	.	.	.	6714.6	.	.
2035	23JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
2036	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
2037	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
2038	11FEB85	1751	11.2	7.2	.	-1	1.8	-1	-1	-0.1	28	.	.	.
2039	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
2040	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
2041	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
2042	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
2043	11MAR85	1716	10.8	7.3	.	-1	1.3	-1	-1	-0.1	18	.	.	.
2044	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.4	.	.
2045	20MAR85	.	.	.	.	.	.	.	.	.	.	6717.7	.	.
2046	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.4	.	.
2047	09APR85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
2048	15APR85	1714	11.2	7.3	.	-1	0.7	-1	-1	-0.1	22	.	.	.
2049	18APR85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
2050	25APR85	.	.	.	.	.	.	.	.	.	.	6724.3	.	.
2051	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.2	.	.
2052	08MAY85	.	.	.	.	.	.	.	.	.	.	6726.7	.	.
2053	13MAY85	1733	10.4	7.2	454	-1	0.6	-1	-1	-0.1	22	.	.	.
2054	15MAY85	.	.	.	.	.	.	.	.	.	.	6721.7	.	.
2055	16MAY85	.	.	.	.	.	.	.	.	.	.	6694.5	.	.
2056	17MAY85	.	.	.	.	.	.	.	.	.	.	6682.2	.	.
2057	18MAY85	.	.	.	.	.	.	.	.	.	.	6676.7	.	.
2058	19MAY85	.	.	.	.	.	.	.	.	.	.	6668.2	.	.
2059	20MAY85	1646	11.4	7.5	.	-1	.	.	-1	.	.	6661.3	.	.
2060	21MAY85	.	.	.	.	.	.	.	.	.	.	6660.6	.	.
2061	22MAY85	.	.	.	.	.	.	.	.	.	.	6665.0	.	.
2062	23MAY85	.	.	.	.	.	.	.	.	.	.	6667.3	.	.
2063	24MAY85	.	.	.	.	.	.	.	.	.	.	6656.4	.	.
2064	25MAY85	.	.	.	.	.	.	.	.	.	.	6650.8	.	.
2065	26MAY85	.	.	.	.	.	.	.	.	.	.	6645.7	.	.
2066	27MAY85	.	.	.	.	.	.	.	.	.	.	6641.5	.	.
2067	28MAY85	.	.	.	.	.	.	.	.	.	.	6640.3	.	.
2068	29MAY85	.	.	.	.	.	.	.	.	.	.	6637.1	.	.
2069	30MAY85	.	.	.	.	.	.	.	.	.	.	6632.9	.	.
2070	31MAY85	.	.	.	.	.	.	.	.	.	.	6628.6	.	.
2071	01JUN85	.	.	.	.	.	.	.	.	.	.	6627.2	.	.
2072	02JUN85	.	.	.	.	.	.	.	.	.	.	6657.8	.	.
2073	03JUN85	.	.	.	.	.	.	.	.	.	.	6671.4	.	.
2074	04JUN85	.	.	.	.	.	.	.	.	.	.	6684.1	.	.
2075	05JUN85	.	.	.	.	.	.	.	.	.	.	6690.0	.	.
2076	06JUN85	.	.	.	.	.	.	.	.	.	.	6686.6	.	.
2077	07JUN85	.	.	.	.	.	.	.	.	.	.	6697.9	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-4A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2078	08JUN85	.	.	.	.	.	.	.	.	.	.	6700.9	.	.
2079	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.2	.	.
2080	10JUN85	.	.	.	.	.	.	.	.	.	.	6704.8	.	.
2081	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.2	.	.
2082	12JUN85	.	.	.	.	.	.	.	.	.	.	6707.6	.	.
2083	13JUN85	.	.	.	.	.	.	.	.	.	.	6708.3	.	.
2084	18JUN85	1670	12.3	7.3	.	0.1	1.2	-1	-1	-0.1	12	.	.	.
2085	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.1	.	.
2086	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
2087	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.3	.	.
2088	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.2	.	.
2089	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
2090	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.3	.	.
2091	27JUL85	1720	10.8	7.3	428	0.4	0.5	-1	-1	-0.1	20	.	.	.
2092	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.9	.	.
2093	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.0	.	.
2094	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.8	.	.
2095	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.5	.	.
2096	23AUG85	1770	11.0	7.3	404	0.2	0.5	-1	-1	-0.1	8	.	.	.
2097	28AUG85	.	.	.	.	.	.	.	.	.	.	6726.4	.	.
2098	04SEP85	.	.	.	.	.	.	.	.	.	.	6726.9	.	.
2099	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
2100	17SEP85	1740	10.6	7.3	396	-0.1	0.5	.	-1	.	5	.	.	.
2101	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
2102	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
2103	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
2104	12OCT85	1753	10.7	7.4	400	0.2	0.5	.	-1	.	18	.	.	.
2105	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
2106	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
2107	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
2108	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
2109	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
2110	16NOV85	1780	10.3	7.6	408	0.2	0.4	.	-1	.	12	.	.	.
2111	22NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
2112	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
2113	04DEC85	1828	10.3	8.3	432	-0.1	0.5	.	-1	.	18	6728.7	.	.
2114	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
2115	19DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
2116	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-4B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2117	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
2118	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.8	.	.
2119	14JAN85	1925	11.3	7.4	.	-1	1.4	-1	1	-0.1	-1	.	.	.
2120	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
2121	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
2122	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
2123	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
2124	11FEB85	1979	11.7	7.3	.	-1	2.3	-1	1	-0.1	21	.	.	.
2125	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
2126	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
2127	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
2128	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
2129	11MAR85	2048	11.5	7.4	.	-1	1.7	-1	2	-0.1	15	.	.	.
2130	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.7	.	.
2131	20MAR85	.	.	.	.	.	.	.	.	.	.	6717.8	.	.
2132	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.4	.	.
2133	09APR85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
2134	15APR85	2268	11.9	7.3	.	1	1.2	-1	1	-0.1	22	.	.	.
2135	18APR85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
2136	25APR85	.	.	.	.	.	.	.	.	.	.	6724.4	.	.
2137	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.2	.	.
2138	08MAY85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
2139	13MAY85	1995	11.6	7.3	472	-1	0.9	-1	1	-0.1	18	.	.	.
2140	15MAY85	.	.	.	.	.	.	.	.	.	.	6702.2	.	.
2141	16MAY85	.	.	.	.	.	.	.	.	.	.	6671.0	.	.
2142	17MAY85	.	.	.	.	.	.	.	.	.	.	6646.3	.	.
2143	18MAY85	.	.	.	.	.	.	.	.	.	.	6640.3	.	.
2144	19MAY85	.	.	.	.	.	.	.	.	.	.	6623.7	.	.
2145	20MAY85	1595	12.3	7.8	.	-1	.	.	-1	.	.	6615.0	.	.
2146	21MAY85	.	.	.	.	.	.	.	.	.	.	6621.6	.	.
2147	22MAY85	.	.	.	.	.	.	.	.	.	.	6643.0	.	.
2148	23MAY85	1727	12.6	7.4	460	-1	1.2	-1	-1	-0.1	10	6646.7	.	.
2149	24MAY85	.	.	.	.	.	.	.	.	.	.	6615.0	.	.
2150	25MAY85	.	.	.	.	.	.	.	.	.	.	6605.0	.	.
2151	26MAY85	.	.	.	.	.	.	.	.	.	.	6595.8	.	.
2152	27MAY85	.	.	.	.	.	.	.	.	.	.	6587.9	.	.
2153	28MAY85	.	.	.	.	.	.	.	.	.	.	6592.9	.	.
2154	29MAY85	.	.	.	.	.	.	.	.	.	.	6581.0	.	.
2155	30MAY85	.	.	.	.	.	.	.	.	.	.	6571.4	.	.
2156	31MAY85	.	.	.	.	.	.	.	.	.	.	6563.0	.	.
2157	01JUN85	.	.	.	.	.	.	.	.	.	.	6660.5	.	.
2158	02JUN85	.	.	.	.	.	.	.	.	.	.	6651.8	.	.
2159	03JUN85	.	.	.	.	.	.	.	.	.	.	6669.5	.	.
2160	04JUN85	.	.	.	.	.	.	.	.	.	.	6684.0	.	.
2161	05JUN85	.	.	.	.	.	.	.	.	.	.	6690.0	.	.
2162	06JUN85	.	.	.	.	.	.	.	.	.	.	6686.2	.	.
2163	07JUN85	.	.	.	.	.	.	.	.	.	.	6698.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-4B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2164	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.6	.	.
2165	09JUN85	.	.	.	.	.	.	.	.	.	.	6704.0	.	.
2166	10JUN85	.	.	.	.	.	.	.	.	.	.	6705.4	.	.
2167	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.9	.	.
2168	12JUN85	.	.	.	.	.	.	.	.	.	.	6708.3	.	.
2169	13JUN85	.	.	.	.	.	.	.	.	.	.	6709.4	.	.
2170	18JUN85	1629	12.5	7.5	.	0.2	1.3	-1	-1	-0.1	10	.	.	.
2171	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.6	.	.
2172	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.7	.	.
2173	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.6	.	.
2174	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.3	.	.
2175	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.4	.	.
2176	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.6	.	.
2177	27JUL85	1720	11.9	7.5	440	0.4	0.7	-1	-1	-0.1	10	.	.	.
2178	31JUL85	.	.	.	.	.	.	.	.	.	.	6724.0	.	.
2179	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.0	.	.
2180	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.9	.	.
2181	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.7	.	.
2182	23AUG85	1770	11.9	7.4	448	0.3	0.8	-1	-1	-0.1	5	.	.	.
2183	28AUG85	.	.	.	.	.	.	.	.	.	.	6726.7	.	.
2184	04SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
2185	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
2186	17SEP85	1680	11.8	7.3	444	0.1	0.7	.	-1	.	5	.	.	.
2187	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
2188	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
2189	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
2190	12OCT85	1981	11.4	7.5	460	0.4	0.8	.	-1	.	10	.	.	.
2191	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
2192	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
2193	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
2194	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
2195	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
2196	16NOV85	1900	11.0	7.5	464	0.4	0.6	.	-1	.	15	.	.	.
2197	22NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
2198	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
2199	04DEC85	2074	11.0	7.8	452	0.2	0.7	.	-1	.	18	6729.0	.	.
2200	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
2201	19DEC85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
2202	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-4C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2203	02JAN85	.	.	.	.	.	.	.	.	.	.	6713.2	.	.
2204	09JAN85	.	.	.	.	.	.	.	.	.	.	6713.5	.	.
2205	14JAN85	1805	12.0	7.7	.	-1	2.4	-1	-1	-0.1	28	.	.	.
2206	16JAN85	.	.	.	.	.	.	.	.	.	.	6713.7	.	.
2207	23JAN85	.	.	.	.	.	.	.	.	.	.	6714.0	.	.
2208	30JAN85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.
2209	06FEB85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
2210	11FEB85	1890	12.2	7.8	.	-1	3.5	-1	-1	-0.1	19	.	.	.
2211	13FEB85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
2212	21FEB85	.	.	.	.	.	.	.	.	.	.	6714.0	.	.
2213	27FEB85	.	.	.	.	.	.	.	.	.	.	6714.1	.	.
2214	06MAR85	.	.	.	.	.	.	.	.	.	.	6714.2	.	.
2215	11MAR85	1827	12.0	7.6	.	-1	2.2	-1	-1	-0.1	15	.	.	.
2216	14MAR85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
2217	20MAR85	.	.	.	.	.	.	.	.	.	.	6716.7	.	.
2218	28MAR85	.	.	.	.	.	.	.	.	.	.	6718.4	.	.
2219	09APR85	.	.	.	.	.	.	.	.	.	.	6720.1	.	.
2220	15APR85	2006	12.0	7.7	.	-1	2.1	-1	-1	-0.1	25	.	.	.
2221	18APR85	.	.	.	.	.	.	.	.	.	.	6721.9	.	.
2222	25APR85	.	.	.	.	.	.	.	.	.	.	6723.2	.	.
2223	01MAY85	.	.	.	.	.	.	.	.	.	.	6724.0	.	.
2224	08MAY85	.	.	.	.	.	.	.	.	.	.	6726.0	.	.
2225	13MAY85	2090	12.2	7.8	444	-1	1.5	-1	-1	-0.1	18	.	.	.
2226	15MAY85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
2227	16MAY85	.	.	.	.	.	.	.	.	.	.	6651.5	.	.
2228	17MAY85	.	.	.	.	.	.	.	.	.	.	6629.6	.	.
2229	18MAY85	.	.	.	.	.	.	.	.	.	.	6622.9	.	.
2230	19MAY85	.	.	.	.	.	.	.	.	.	.	6607.2	.	.
2231	21MAY85	.	.	.	.	.	.	.	.	.	.	6700.9	.	.
2232	22MAY85	.	.	.	.	.	.	.	.	.	.	6617.3	.	.
2233	23MAY85	1829	13.2	7.9	434	-1	2.0	1	-1	-0.1	15	6619.5	.	.
2234	24MAY85	.	.	.	.	.	.	.	.	.	.	6595.6	.	.
2235	25MAY85	.	.	.	.	.	.	.	.	.	.	6586.2	.	.
2236	26MAY85	.	.	.	.	.	.	.	.	.	.	6527.5	.	.
2237	27MAY85	.	.	.	.	.	.	.	.	.	.	6570.0	.	.
2238	28MAY85	.	.	.	.	.	.	.	.	.	.	6573.6	.	.
2239	29MAY85	.	.	.	.	.	.	.	.	.	.	6564.0	.	.
2240	30MAY85	.	.	.	.	.	.	.	.	.	.	6554.8	.	.
2241	31MAY85	.	.	.	.	.	.	.	.	.	.	6546.6	.	.
2242	01JUN85	.	.	.	.	.	.	.	.	.	.	6644.3	.	.
2243	02JUN85	.	.	.	.	.	.	.	.	.	.	6651.8	.	.
2244	03JUN85	.	.	.	.	.	.	.	.	.	.	6668.5	.	.
2245	04JUN85	.	.	.	.	.	.	.	.	.	.	6682.8	.	.
2246	05JUN85	.	.	.	.	.	.	.	.	.	.	6689.0	.	.
2247	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.2	.	.
2248	07JUN85	.	.	.	.	.	.	.	.	.	.	6697.3	.	.
2249	08JUN85	.	.	.	.	.	.	.	.	.	.	6700.4	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-4C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2250	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.0	.	.
2251	10JUN85	.	.	.	.	.	.	.	.	.	.	6704.5	.	.
2252	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.0	.	.
2253	12JUN85	.	.	.	.	.	.	.	.	.	.	6707.3	.	.
2254	13JUN85	.	.	.	.	.	.	.	.	.	.	6708.4	.	.
2255	18JUN85	1700	14.7	7.9	.	0.2	2.3	-1	-1	-0.1	15	.	.	.
2256	19JUN85	.	.	.	.	.	.	.	.	.	.	6712.6	.	.
2257	26JUN85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
2258	03JUL85	.	.	.	.	.	.	.	.	.	.	6717.7	.	.
2259	11JUL85	.	.	.	.	.	.	.	.	.	.	6719.4	.	.
2260	17JUL85	.	.	.	.	.	.	.	.	.	.	6720.4	.	.
2261	25JUL85	.	.	.	.	.	.	.	.	.	.	6721.7	.	.
2262	27JUL85	1770	12.6	7.8	448	0.4	1.1	-1	-1	-0.1	18	.	.	.
2263	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
2264	07AUG85	.	.	.	.	.	.	.	.	.	.	6724.1	.	.
2265	14AUG85	.	.	.	.	.	.	.	.	.	.	6724.9	.	.
2266	21AUG85	.	.	.	.	.	.	.	.	.	.	6722.7	.	.
2267	23AUG85	1740	12.4	7.8	452	0.4	1.3	-1	-1	-0.1	10	.	.	.
2268	28AUG85	.	.	.	.	.	.	.	.	.	.	6725.8	.	.
2269	04SEP85	.	.	.	.	.	.	.	.	.	.	6726.3	.	.
2270	12SEP85	.	.	.	.	.	.	.	.	.	.	6726.7	.	.
2271	17SEP85	1900	12.5	7.6	464	0.2	1.1	.	-1	.	30	.	.	.
2272	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
2273	25SEP85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
2274	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
2275	12OCT85	1981	11.9	7.9	448	0.5	1.2	.	-1	.	15	.	.	.
2276	16OCT85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
2277	24OCT85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
2278	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
2279	03NOV85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
2280	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
2281	16NOV85	1950	11.7	7.8	464	0.3	1.0	.	-1	.	12	.	.	.
2282	22NOV85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
2283	27NOV85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
2284	04DEC85	2024	11.9	8.0	464	0.2	1.1	.	-1	.	68	6728.2	.	.
2285	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
2286	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
2287	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-4S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2288	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.6	.	.
2289	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
2290	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
2291	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
2292	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
2293	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
2294	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
2295	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
2296	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
2297	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
2298	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.8	.	.
2299	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.1	.	.
2300	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.9	.	.
2301	09APR85	.	.	.	.	.	.	.	.	.	.	6721.7	.	.
2302	18APR85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
2303	25APR85	.	.	.	.	.	.	.	.	.	.	6724.8	.	.
2304	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
2305	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
2306	15MAY85	.	.	.	.	.	.	.	.	.	.	6724.5	.	.
2307	16MAY85	.	.	.	.	.	.	.	.	.	.	6703.4	.	.
2308	17MAY85	.	.	.	.	.	.	.	.	.	.	6696.4	.	.
2309	18MAY85	.	.	.	.	.	.	.	.	.	.	6696.8	.	.
2310	19MAY85	.	.	.	.	.	.	.	.	.	.	6696.6	.	.
2311	20MAY85	.	.	.	.	.	.	.	.	.	.	6696.5	.	.
2312	21MAY85	.	.	.	.	.	.	.	.	.	.	6696.8	.	.
2313	22MAY85	.	.	.	.	.	.	.	.	.	.	6696.4	.	.
2314	23MAY85	.	.	.	.	.	.	.	.	.	.	6700.3	.	.
2315	24MAY85	.	.	.	.	.	.	.	.	.	.	6696.8	.	.
2316	25MAY85	.	.	.	.	.	.	.	.	.	.	6696.6	.	.
2317	26MAY85	.	.	.	.	.	.	.	.	.	.	6696.7	.	.
2318	27MAY85	.	.	.	.	.	.	.	.	.	.	6697.1	.	.
2319	28MAY85	.	.	.	.	.	.	.	.	.	.	6697.1	.	.
2320	29MAY85	.	.	.	.	.	.	.	.	.	.	6697.1	.	.
2321	30MAY85	.	.	.	.	.	.	.	.	.	.	6692.1	.	.
2322	31MAY85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
2323	01JUN85	.	.	.	.	.	.	.	.	.	.	6697.2	.	.
2324	02JUN85	.	.	.	.	.	.	.	.	.	.	6697.4	.	.
2325	03JUN85	.	.	.	.	.	.	.	.	.	.	6697.3	.	.
2326	04JUN85	.	.	.	.	.	.	.	.	.	.	6697.2	.	.
2327	05JUN85	.	.	.	.	.	.	.	.	.	.	6697.0	.	.
2328	06JUN85	.	.	.	.	.	.	.	.	.	.	6697.0	.	.
2329	07JUN85	.	.	.	.	.	.	.	.	.	.	6698.0	.	.
2330	08JUN85	.	.	.	.	.	.	.	.	.	.	6697.3	.	.
2331	09JUN85	.	.	.	.	.	.	.	.	.	.	6702.5	.	.
2332	10JUN85	.	.	.	.	.	.	.	.	.	.	6704.6	.	.
2333	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.0	.	.
2334	12JUN85	.	.	.	.	.	.	.	.	.	.	6707.2	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-4S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2335	13JUN85	.	.	.	.	.	.	.	.	.	.	6708.6	.	.
2336	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.0	.	.
2337	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.4	.	.
2338	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.4	.	.
2339	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.1	.	.
2340	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.4	.	.
2341	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.8	.	.
2342	31JUL85	.	.	.	.	.	.	.	.	.	.	6724.1	.	.
2343	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.2	.	.
2344	14AUG85	.	.	.	.	.	.	.	.	.	.	6726.1	.	.
2345	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
2346	28AUG85	.	.	.	.	.	.	.	.	.	.	6726.7	.	.
2347	04SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
2348	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
2349	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
2350	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
2351	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
2352	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
2353	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
2354	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
2355	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
2356	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
2357	22NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
2358	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.6	.	.
2359	04DEC85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
2360	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
2361	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
2362	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-5A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2363	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.7	.	.
2364	03JAN85	1753	13.8	7.2	.	.	0.8	-1	1	-0.1	25	.	.	.
2365	07JAN85	1800	12.8	7.3	.	.	0.7	-1	-1	-0.1	25	.	.	.
2366	09JAN85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
2367	14JAN85	1790	12.9	7.3	.	-1	0.7	-1	1	.	25	.	.	.
2368	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
2369	21JAN85	1684	12.5	7.3	.	-1	1.0	-1	1	-0.1	28	.	.	.
2370	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
2371	28JAN85	1788	.	7.2	.	-1	1.0	-1	3	-0.1	20	.	.	.
2372	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
2373	04FEB85	1818	11.0	7.2	.	-1	1.1	-1	1	-0.1	15	.	.	.
2374	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
2375	11FEB85	1890	13.2	7.3	.	-1	0.8	-1	-1	-0.1	28	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-5A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2376	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
2377	18FEB85	1809	13.4	7.2	.	-1.0	1.2	-1	1	-0.1	8	.	.	.
2378	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
2379	25FEB85	1779	13.0	7.1	.	-1.0	1.2	-1	-1	-0.1	20	.	.	.
2380	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
2381	04MAR85	1829	13.0	7.1	.	-1.0	1.2	-1	-1	-0.1	12	.	.	.
2382	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
2383	11MAR85	1882	13.2	7.3	.	-1.0	1.0	-1	-1	-0.1	20	.	.	.
2384	14MAR85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
2385	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.2	.	.
2386	25MAR85	1809	13.5	7.1	.	-1.0	0.7	-1	-1	-0.1	20	.	.	.
2387	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.8	.	.
2388	01APR85	1813	13.2	7.1	.	-1.0	0.7	-1	-1	-0.1	15	.	.	.
2389	08APR85	1790	13.4	7.2	.	-1.0	0.6	-1	1	-0.1	15	.	.	.
2390	09APR85	.	.	.	.	.	.	.	.	.	.	6721.6	.	.
2391	15APR85	1915	13.6	7.3	.	-1.0	0.6	-1	1	-0.1	25	.	.	.
2392	18APR85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
2393	23APR85	1865	13.0	7.3	454	-1.0	0.6	-1	1	-0.1	20	.	.	.
2394	25APR85	.	.	.	.	.	.	.	.	.	.	6724.8	.	.
2395	29APR85	1728	13.3	7.2	454	-1.0	0.6	-1	1	-0.1	15	.	.	.
2396	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
2397	06MAY85	1836	13.0	7.2	458	-1.0	0.7	-1	1	-0.1	22	.	.	.
2398	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
2399	13MAY85	1838	13.0	7.2	452	-1.0	0.5	-1	1	-0.1	20	.	.	.
2400	15MAY85	.	.	.	.	.	.	.	.	.	.	6710.6	.	.
2401	16MAY85	.	.	.	.	.	.	.	.	.	.	6673.5	.	.
2402	17MAY85	.	.	.	.	.	.	.	.	.	.	6650.4	.	.
2403	18MAY85	.	.	.	.	.	.	.	.	.	.	6645.3	.	.
2404	19MAY85	.	.	.	.	.	.	.	.	.	.	6629.7	.	.
2405	20MAY85	1801	12.7	7.6	.	-1.0	.	.	4	.	.	6622.7	.	.
2406	21MAY85	.	.	.	.	.	.	.	.	.	.	6627.3	.	.
2407	22MAY85	1743	13.1	7.3	.	-1.0	.	.	1	.	.	6642.6	.	.
2408	23MAY85	.	.	.	.	.	.	.	.	.	.	6648.3	.	.
2409	24MAY85	.	.	.	.	.	.	.	.	.	.	6610.8	.	.
2410	25MAY85	.	.	.	.	.	.	.	.	.	.	6600.1	.	.
2411	26MAY85	.	.	.	.	.	.	.	.	.	.	6590.1	.	.
2412	27MAY85	.	.	.	.	.	.	.	.	.	.	6582.8	.	.
2413	28MAY85	1640	14.5	7.2	.	-1.0	.	.	2	.	.	6588.1	.	.
2414	29MAY85	.	.	.	.	.	.	.	.	.	.	6576.2	.	.
2415	30MAY85	1619	11.3	7.3	430	-1.0	0.8	-1	1	-0.1	18	6565.5	.	.
2416	31MAY85	.	.	.	.	.	.	.	.	.	.	6556.9	.	.
2417	01JUN85	.	.	.	.	.	.	.	.	.	.	6554.6	.	.
2418	02JUN85	.	.	.	.	.	.	.	.	.	.	6649.2	.	.
2419	03JUN85	1629	13.0	7.3	.	0.1	.	.	-1	.	.	6666.9	.	.
2420	04JUN85	.	.	.	.	.	.	.	.	.	.	6682.4	.	.
2421	05JUN85	.	.	.	.	.	.	.	.	.	.	6688.6	.	.
2422	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.0	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-5A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2423	07JUN85	.	.	.	.	.	.	.	.	.	.	6698.0	.	.
2424	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.3	.	.
2425	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.8	.	.
2426	10JUN85	1632	12.9	7.3	.	-0.1	.	.	-1	.	.	6704.8	.	.
2427	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.6	.	.
2428	12JUN85	.	.	.	.	.	.	.	.	.	.	6707.2	.	.
2429	13JUN85	.	.	.	.	.	.	.	.	.	.	6709.0	.	.
2430	18JUN85	1493	12.7	7.4	.	-0.1	1.1	-1	-1	-0.1	15	.	.	.
2431	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.4	.	.
2432	20JUN85	1650	13.0	7.3	.	0.2	1.7	-1	4	-0.1	20	.	.	.
2433	25JUN85	1698	12.4	7.3	.	-0.1	1.2	-1	2	-0.1	18	.	.	.
2434	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.6	.	.
2435	28JUN85	1696	12.9	7.3	.	0.1	.	-1	2	-0.1	15	.	.	.
2436	02JUL85	1657	13.4	7.5	428	-0.1	.	.	2	.	11	.	.	.
2437	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.5	.	.
2438	05JUL85	1676	17.0	7.5	440	-0.1	.	.	2	.	35	.	.	.
2439	08JUL85	1698	13.0	7.3	448	-0.1	0.7	-1	-1	.	18	.	.	.
2440	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.3	.	.
2441	14JUL85	1739	14.0	7.2	425	0.5	0.5	.	2	-0.1	20	.	.	.
2442	16JUL85	1700	13.0	7.4	430	-0.1	0.8	-1	-1	-0.1	21	.	.	.
2443	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
2444	19JUL85	1693	13.7	7.4	424	0.2	0.4	-1	-1	-0.1	22	.	.	.
2445	24JUL85	1884	12.8	7.3	432	0.1	0.4	-1	-1	-0.1	12	.	.	.
2446	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.6	.	.
2447	27JUL85	1720	12.9	7.4	464	0.4	0.4	-1	-1	-0.1	19	.	.	.
2448	30JUL85	1693	12.5	7.3	440	0.6	0.4	-1	-1	-0.1	15	.	.	.
2449	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.6	.	.
2450	02AUG85	1836	12.8	7.3	448	0.4	0.5	-1	-1	-0.1	5	.	.	.
2451	06AUG85	1773	12.9	7.3	424	0.5	0.5	-1	-1	-0.1	2	.	.	.
2452	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.0	.	.
2453	10AUG85	1700	12.7	7.3	428	0.2	0.5	-1	-1	-0.1	9	.	.	.
2454	13AUG85	1794	12.8	7.3	428	0.1	0.4	-1	-1	-0.1	31	.	.	.
2455	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.7	.	.
2456	16AUG85	1700	13.8	7.3	472	0.1	0.5	-1	-1	-0.1	5	.	.	.
2457	20AUG85	1616	13.0	7.3	444	-0.1	0.5	.	-1	-0.1	15	.	.	.
2458	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.5	.	.
2459	23AUG85	1686	12.7	7.3	424	0.3	0.5	-1	-1	-0.1	5	.	.	.
2460	28AUG85	1658	13.1	7.5	440	0.3	0.5	-1	-1	-0.1	3	6726.6	.	.
2461	04SEP85	1779	13.5	7.2	436	-0.1	0.6	-1	-1	-0.1	45	6727.1	.	.
2462	11SEP85	1800	12.4	7.3	440	-0.1	0.5	.	-1	.	10	.	.	.
2463	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
2464	18SEP85	1673	12.5	7.2	440	-0.1	0.6	.	-1	.	18	6727.7	.	.
2465	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
2466	28SEP85	1810	12.1	7.5	420	-0.1	0.6	.	-1	.	20	.	.	.
2467	010CT85	.	.	.	.	.	.	.	.	.	.	6726.2	.	.
2468	020CT85	.	.	.	.	.	.	.	.	.	.	6726.4	.	.
2469	030CT85	1872	12.5	7.3	504	0.1	0.5	.	-1	.	22	6726.9	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-5A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2470	040CT85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
2471	050CT85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
2472	060CT85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
2473	090CT85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
2474	120CT85	1727	12.3	7.4	460	0.2	0.5	.	-1	.	-1	.	.	.
2475	160CT85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
2476	180CT85	1780	12.5	7.3	428	-0.1	0.6	.	-1	.	20	.	.	.
2477	230CT85	1656	12.2	7.4	432	-0.1	0.5	.	3	.	18	.	.	.
2478	240CT85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
2479	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
2480	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
2481	08NOV85	1773	12.0	7.6	424	-0.1	0.5	.	-1	.	10	.	.	.
2482	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
2483	16NOV85	1750	12.0	7.6	424	0.2	0.4	.	-1	.	12	.	.	.
2484	22NOV85	1713	11.8	7.4	424	0.1	0.4	.	-1	.	12	6729.3	.	.
2485	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
2486	29NOV85	1750	12.0	7.3	420	-0.1	0.5	.	-1	.	20	.	.	.
2487	04DEC85	1805	12.0	7.8	440	-0.1	0.5	.	-1	.	20	6729.1	.	.
2488	11DEC85	1463	11.8	7.3	428	-0.1	0.6	.	2	.	2	.	.	.
2489	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
2490	17DEC85	1705	12.0	7.3	432	.	0.5	.	-1	.	18	.	.	.
2491	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
2492	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
2493	26DEC85	1651	12.0	7.1	420	-0.1	0.5	.	-1	.	22	.	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-5B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2494	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.1	.	.
2495	03JAN85	3793	17.3	7.2	.	.	1.6	-1	5	0.1	25	.	.	.
2496	07JAN85	3820	17.2	7.3	.	.	1.2	-1	4	0.2	25	.	.	.
2497	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.1	.	.
2498	14JAN85	4060	17.6	7.3	.	1.1	1.3	-1	4	.	25	.	.	.
2499	16JAN85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
2500	21JAN85	3818	17.1	7.3	.	-1.0	1.5	-1	4	0.1	25	.	.	.
2501	23JAN85	.	.	.	.	.	.	.	.	.	.	6714.8	.	.
2502	28JAN85	3557	.	7.2	.	-1.0	1.7	-1	6	0.1	28	.	.	.
2503	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
2504	04FEB85	3785	16.5	7.2	.	-1.0	1.7	-1	4	0.1	15	.	.	.
2505	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
2506	11FEB85	3836	18.0	7.1	.	-1.0	1.4	-1	4	0.2	25	.	.	.
2507	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
2508	18FEB85	3990	17.8	7.2	.	-1.0	1.8	-1	3	0.1	8	.	.	.
2509	21FEB85	.	.	.	.	.	.	.	.	.	.	6714.7	.	.
2510	25FEB85	3665	17.5	7.1	.	-1.0	1.8	-1	4	0.1	18	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-5B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2511	27FEB85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
2512	04MAR85	3747	17.0	7.1	.	-1.0	1.9	-1	4	0.2	15	.	.	.
2513	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
2514	11MAR85	3875	17.5	7.3	.	-1.0	1.5	-1	4	0.1	20	.	.	.
2515	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.4	.	.
2516	18MAR85	3809	17.2	7.2	.	-1.0	1.2	-1	4	0.1	20	.	.	.
2517	20MAR85	.	.	.	.	.	.	.	.	.	.	6717.5	.	.
2518	25MAR85	3618	17.0	7.1	.	-1.0	1.4	-1	5	0.1	22	.	.	.
2519	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.1	.	.
2520	01APR85	3648	17.9	7.1	.	-1.0	1.4	-1	4	0.1	12	.	.	.
2521	08APR85	3750	17.7	7.2	.	-1.0	1.4	-1	4	0.1	18	.	.	.
2522	09APR85	.	.	.	.	.	.	.	.	.	.	6720.9	.	.
2523	15APR85	3931	17.4	7.2	.	-1.0	1.2	-1	4	0.1	22	.	.	.
2524	18APR85	.	.	.	.	.	.	.	.	.	.	6722.7	.	.
2525	23APR85	3931	17.2	7.3	500	-1.0	1.2	-1	4	0.1	20	.	.	.
2526	25APR85	.	.	.	.	.	.	.	.	.	.	6724.1	.	.
2527	29APR85	3769	17.5	7.3	492	-1.0	1.2	-1	4	0.1	20	.	.	.
2528	01MAY85	.	.	.	.	.	.	.	.	.	.	6724.9	.	.
2529	06MAY85	3886	17.6	7.1	490	-1.0	1.4	-1	4	0.2	25	.	.	.
2530	08MAY85	.	.	.	.	.	.	.	.	.	.	6726.4	.	.
2531	13MAY85	3570	17.6	7.1	500	-1.0	1.0	-1	4	-0.1	30	.	.	.
2532	15MAY85	.	.	.	.	.	.	.	.	.	.	6709.2	.	.
2533	16MAY85	.	.	.	.	.	.	.	.	.	.	6671.9	.	.
2534	17MAY85	.	.	.	.	.	.	.	.	.	.	6647.8	.	.
2535	18MAY85	.	.	.	.	.	.	.	.	.	.	6642.8	.	.
2536	19MAY85	.	.	.	.	.	.	.	.	.	.	6626.8	.	.
2537	20MAY85	3303	17.8	7.5	.	-1.0	.	.	5	.	.	6620.6	.	.
2538	21MAY85	.	.	.	.	.	.	.	.	.	.	6625.4	.	.
2539	22MAY85	3188	17.6	7.3	.	2.3	.	.	2	.	.	6641.7	.	.
2540	23MAY85	.	.	.	.	.	.	.	.	.	.	6647.2	.	.
2541	24MAY85	.	.	.	.	.	.	.	.	.	.	6609.7	.	.
2542	25MAY85	.	.	.	.	.	.	.	.	.	.	6598.8	.	.
2543	26MAY85	.	.	.	.	.	.	.	.	.	.	6588.7	.	.
2544	27MAY85	.	.	.	.	.	.	.	.	.	.	6581.1	.	.
2545	28MAY85	3383	19.0	7.2	.	1.3	.	.	3	.	.	6586.8	.	.
2546	29MAY85	.	.	.	.	.	.	.	.	.	.	6574.3	.	.
2547	30MAY85	3026	16.8	7.3	480	-1.0	1.4	-1	3	-0.1	20	6563.2	.	.
2548	31MAY85	.	.	.	.	.	.	.	.	.	.	6554.1	.	.
2549	01JUN85	.	.	.	.	.	.	.	.	.	.	6551.6	.	.
2550	02JUN85	.	.	.	.	.	.	.	.	.	.	6649.3	.	.
2551	03JUN85	2530	17.8	7.3	.	0.4	.	.	2	.	.	6667.2	.	.
2552	04JUN85	.	.	.	.	.	.	.	.	.	.	6682.4	.	.
2553	05JUN85	.	.	.	.	.	.	.	.	.	.	6688.6	.	.
2554	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.0	.	.
2555	07JUN85	.	.	.	.	.	.	.	.	.	.	6697.8	.	.
2556	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.1	.	.
2557	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.5	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-5B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2558	10JUN85	2448	17.9	7.3	.	0.2	.	.	3	.	.	6704.6	.	.
2559	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.4	.	.
2560	12JUN85	.	.	.	.	.	.	.	.	.	.	6707.7	.	.
2561	13JUN85	.	.	.	.	.	.	.	.	.	.	6708.9	.	.
2562	18JUN85	2429	16.8	7.4	.	0.3	1.5	-1	2	-0.1	12	.	.	.
2563	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.2	.	.
2564	20JUN85	2530	18.0	7.3	.	0.3	1.8	-1	2	-0.1	18	.	.	.
2565	25JUN85	2521	16.9	7.4	.	0.1	1.4	-1	2	-0.1	18	.	.	.
2566	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
2567	28JUN85	2523	17.7	7.3	.	0.3	.	-1	2	-0.1	8	.	.	.
2568	02JUL85	2458	16.7	7.4	464	0.2	.	.	2	.	2	.	.	.
2569	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.3	.	.
2570	05JUL85	2550	17.0	7.3	476	0.2	.	.	2	.	18	.	.	.
2571	08JUL85	2534	17.2	7.3	484	0.2	1.0	-1	-1	.	13	.	.	.
2572	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.0	.	.
2573	14JUL85	2717	16.0	7.4	480	0.8	0.9	.	3	-0.1	40	.	.	.
2574	16JUL85	2540	17.4	7.4	490	0.1	1.0	-1	3	-0.1	22	.	.	.
2575	17JUL85	.	.	.	.	.	.	.	.	.	.	6720.9	.	.
2576	19JUL85	2589	15.3	7.5	460	0.3	0.8	-1	2	-0.1	35	.	.	.
2577	24JUL85	2744	15.8	7.3	492	0.3	0.8	-1	2	-0.1	17	.	.	.
2578	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.3	.	.
2579	27JUL85	2519	17.1	7.4	480	0.4	0.9	-1	-1	-0.1	13	.	.	.
2580	30JUL85	2689	16.9	7.4	488	0.7	0.9	-1	-1	-0.1	20	.	.	.
2581	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.6	.	.
2582	02AUG85	2590	16.6	7.3	452	0.4	0.9	-1	-1	-0.1	8	.	.	.
2583	06AUG85	2744	17.2	7.3	484	0.5	0.8	-1	-1	-0.1	13	.	.	.
2584	07AUG85	.	.	.	.	.	.	.	.	.	.	6724.7	.	.
2585	10AUG85	2760	16.9	7.3	488	0.4	0.9	-1	-1	-0.1	-1	.	.	.
2586	13AUG85	2743	16.5	7.4	472	0.3	0.8	-1	1	-0.1	11	.	.	.
2587	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
2588	16AUG85	2772	16.7	7.3	520	0.3	0.8	-1	1	-0.1	3	.	.	.
2589	20AUG85	2777	17.2	7.3	512	0.3	0.8	.	-1	-0.1	12	.	.	.
2590	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.3	.	.
2591	23AUG85	2850	16.5	7.3	488	0.5	0.9	-1	-1	-0.1	5	.	.	.
2592	28AUG85	2876	16.5	7.6	504	0.4	0.9	-1	-1	-0.1	-1	6726.3	.	.
2593	04SEP85	2893	15.5	7.3	492	0.3	1.0	-1	1	-0.1	33	6726.8	.	.
2594	11SEP85	2820	16.4	7.3	488	0.2	0.9	.	-1	.	92	.	.	.
2595	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
2596	18SEP85	2739	16.6	7.2	496	0.3	0.9	.	2	.	10	6727.5	.	.
2597	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
2598	28SEP85	1730	16.0	7.5	468	0.2	0.9	.	-1	.	-1	.	.	.
2599	01OCT85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
2600	02OCT85	.	.	.	.	.	.	.	.	.	.	6726.2	.	.
2601	03OCT85	1791	16.5	7.3	488	0.4	0.9	.	-1	.	15	6726.7	.	.
2602	04OCT85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
2603	05OCT85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
2604	06OCT85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-5B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2605	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
2606	12OCT85	2794	15.9	7.4	472	0.5	0.9	.	-1	.	15	.	.	.
2607	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
2608	18OCT85	2650	16.2	7.3	488	0.6	0.9	.	-1	.	15	.	.	.
2609	23OCT85	2848	15.4	7.4	480	0.3	0.9	.	2	.	22	.	.	.
2610	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
2611	01NOV85	2807	14.7	7.8	480	0.3	1.0	.	2	.	25	6728.6	.	.
2612	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
2613	08NOV85	2920	15.0	7.5	500	0.2	0.9	.	3	.	10	.	.	.
2614	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
2615	16NOV85	2973	15.7	7.5	488	0.3	0.8	.	2	.	12	.	.	.
2616	22NOV85	2950	15.4	7.4	480	0.2	0.8	.	2	.	5	6729.0	.	.
2617	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
2618	29NOV85	3100	15.0	7.2	476	0.1	0.8	.	2	.	25	.	.	.
2619	04DEC85	2958	14.6	7.6	476	0.2	0.9	.	2	.	75	6728.8	.	.
2620	11DEC85	2338	15.7	7.2	476	0.2	0.9	.	2	.	19	.	.	.
2621	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
2622	17DEC85	2753	15.7	7.3	472	.	1.0	.	2	.	18	.	.	.
2623	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
2624	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
2625	26DEC85	2669	15.5	7.1	468	0.2	0.9	.	2	.	22	.	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-5C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2626	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.7	.	.
2627	03JAN85	1845	16.9	7.6	.	.	1.7	-1	2	-0.1	20	.	.	.
2628	07JAN85	1835	16.9	7.7	.	.	1.5	-1	1	-0.1	22	.	.	.
2629	09JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
2630	14JAN85	1900	17.2	7.6	.	-1	1.6	-1	2	.	20	.	.	.
2631	16JAN85	.	.	.	.	.	.	.	.	.	.	6714.6	.	.
2632	21JAN85	1811	16.9	7.6	.	-1	2.0	-1	2	-0.1	18	.	.	.
2633	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
2634	28JAN85	2272	.	7.4	.	-1	2.0	-1	4	-0.1	21	.	.	.
2635	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
2636	04FEB85	1897	16.6	7.6	.	-1	2.0	-1	2	-0.1	12	.	.	.
2637	06FEB85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.
2638	11FEB85	1890	17.7	7.6	.	-1	1.6	-1	1	-0.1	15	.	.	.
2639	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
2640	18FEB85	1905	17.8	7.6	.	-1	2.1	-1	2	-0.1	5	.	.	.
2641	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
2642	25FEB85	1699	17.4	7.5	.	-1	2.1	-1	2	-0.1	12	.	.	.
2643	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
2644	04MAR85	1873	17.5	7.4	.	-1	2.0	-1	2	-0.1	10	.	.	.
2645	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-5C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2646	11MAR85	1882	17.6	7.6	.	-1.0	1.7	-1	2	-0.1	15	.	.	.
2647	14MAR85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
2648	18MAR85	1931	17.3	7.5	.	-1.0	1.6	-1	2	-0.1	15	.	.	.
2649	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.2	.	.
2650	25MAR85	1894	17.5	7.5	.	-1.0	1.7	-1	2	-0.1	15	.	.	.
2651	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.8	.	.
2652	01APR85	1878	17.4	7.4	.	-1.0	1.9	-1	2	-0.1	12	.	.	.
2653	08APR85	1920	17.7	7.6	.	-1.0	1.6	-1	2	-0.1	18	.	.	.
2654	09APR85	.	.	.	.	.	.	.	.	.	.	6721.6	.	.
2655	15APR85	2016	17.3	7.6	.	-1.0	1.6	-1	2	-0.1	18	.	.	.
2656	18APR85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
2657	23APR85	1920	17.3	7.6	454	-1.0	1.6	-1	2	-0.1	15	.	.	.
2658	25APR85	.	.	.	.	.	.	.	.	.	.	6724.8	.	.
2659	29APR85	1885	17.4	7.6	450	-1.0	1.6	-1	2	-0.1	15	.	.	.
2660	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
2661	06MAY85	2030	17.2	7.5	446	-1.0	1.7	-1	2	-0.1	18	.	.	.
2662	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
2663	13MAY85	1995	17.5	7.7	450	-1.0	1.2	-1	2	-0.1	12	.	.	.
2664	15MAY85	.	.	.	.	.	.	.	.	.	.	6709.6	.	.
2665	16MAY85	.	.	.	.	.	.	.	.	.	.	6672.1	.	.
2666	17MAY85	.	.	.	.	.	.	.	.	.	.	6648.4	.	.
2667	18MAY85	.	.	.	.	.	.	.	.	.	.	6643.2	.	.
2668	19MAY85	.	.	.	.	.	.	.	.	.	.	6627.2	.	.
2669	20MAY85	1852	17.8	7.6	.	-1.0	.	.	4	.	.	6620.8	.	.
2670	21MAY85	.	.	.	.	.	.	.	.	.	.	6625.5	.	.
2671	22MAY85	.	.	.	.	.	.	.	.	.	.	6641.4	.	.
2672	23MAY85	.	.	.	.	.	.	.	.	.	.	6647.0	.	.
2673	24MAY85	.	.	.	.	.	.	.	.	.	.	6608.5	.	.
2674	25MAY85	.	.	.	.	.	.	.	.	.	.	6597.5	.	.
2675	26MAY85	.	.	.	.	.	.	.	.	.	.	6587.3	.	.
2676	27MAY85	.	.	.	.	.	.	.	.	.	.	6579.7	.	.
2677	28MAY85	2071	18.0	7.7	.	2.3	.	.	21	.	.	6585.6	.	.
2678	29MAY85	.	.	.	.	.	.	.	.	.	.	6572.8	.	.
2679	30MAY85	1973	17.1	7.6	430	-1.0	1.9	-1	9	-0.1	22	6561.5	.	.
2680	31MAY85	.	.	.	.	.	.	.	.	.	.	6552.3	.	.
2681	01JUN85	.	.	.	.	.	.	.	.	.	.	6550.0	.	.
2682	02JUN85	.	.	.	.	.	.	.	.	.	.	6649.3	.	.
2683	03JUN85	1842	18.0	7.7	.	0.5	.	.	8	.	.	6667.0	.	.
2684	04JUN85	.	.	.	.	.	.	.	.	.	.	6682.4	.	.
2685	05JUN85	.	.	.	.	.	.	.	.	.	.	6688.6	.	.
2686	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.1	.	.
2687	07JUN85	.	.	.	.	.	.	.	.	.	.	6698.0	.	.
2688	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.4	.	.
2689	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.9	.	.
2690	10JUN85	1836	18.0	7.7	.	0.3	.	.	10	.	.	6704.8	.	.
2691	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.7	.	.
2692	12JUN85	.	.	.	.	.	.	.	.	.	.	6707.7	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-5C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2693	13JUN85	.	.	.	.	.	.	.	.	.	.	6709.1	.	.
2694	19JUN85	1915	18.3	7.6	.	0.6	2.5	-1	11	-0.1	12	6713.5	.	.
2695	20JUN85	1896	18.5	7.7	.	0.5	2.3	-1	10	-0.1	14	.	.	.
2696	25JUN85	1929	17.4	7.7	.	0.2	1.7	-1	12	-0.1	12	.	.	.
2697	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.6	.	.
2698	02JUL85	1938	17.6	7.8	424	0.3	.	.	10	.	3	.	.	.
2699	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.5	.	.
2700	05JUL85	1918	18.0	7.7	384	0.4	.	.	10	.	16	.	.	.
2701	08JUL85	1957	17.8	7.7	432	0.4	1.2	-1	-1	.	16	.	.	.
2702	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.3	.	.
2703	14JUL85	1996	17.0	7.9	440	1.1	1.2	.	9	-0.1	20	.	.	.
2704	16JUL85	1915	18.6	7.7	460	0.2	1.3	-1	7	-0.1	17	.	.	.
2705	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
2706	19JUL85	1992	17.8	7.8	426	0.6	1.1	-1	9	-0.1	42	.	.	.
2707	24JUL85	2081	17.7	7.7	436	0.5	1.0	-1	8	-0.1	11	.	.	.
2708	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.6	.	.
2709	27JUL85	1872	17.7	7.8	436	0.4	1.1	-1	6	-0.1	4	.	.	.
2710	30JUL85	1892	17.8	7.8	440	0.7	1.1	-1	5	-0.1	12	.	.	.
2711	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.8	.	.
2712	02AUG85	1884	17.7	7.8	448	0.6	1.1	-1	6	-0.1	12	.	.	.
2713	06AUG85	2030	17.8	7.7	504	0.6	1.0	-1	5	-0.1	-1	.	.	.
2714	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.0	.	.
2715	10AUG85	1966	17.8	7.8	428	0.5	1.1	-1	5	-0.1	2	.	.	.
2716	13AUG85	2001	17.9	7.7	472	0.4	1.0	-1	5	-0.1	7	.	.	.
2717	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.8	.	.
2718	16AUG85	2000	17.5	7.8	456	0.4	1.1	-1	5	-0.1	-1	.	.	.
2719	20AUG85	1959	18.7	7.6	440	0.3	1.1	.	5	-0.1	4	.	.	.
2720	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.5	.	.
2721	23AUG85	1895	17.8	7.8	440	0.4	1.1	-1	4	-0.1	3	.	.	.
2722	28AUG85	1934	17.8	8.0	432	0.5	1.3	-1	4	-0.1	-1	6726.6	.	.
2723	04SEP85	3163	17.5	7.8	436	0.4	1.3	-1	5	-0.1	9	6727.1	.	.
2724	11SEP85	2140	16.8	7.6	436	0.3	1.1	.	3	.	12	.	.	.
2725	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
2726	18SEP85	1877	17.0	7.6	448	0.3	1.2	.	4	.	10	6727.7	.	.
2727	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
2728	28SEP85	1880	16.9	7.8	440	0.2	1.1	.	3	.	15	.	.	.
2729	01OCT85	.	.	.	.	.	.	.	.	.	.	6725.4	.	.
2730	02OCT85	.	.	.	.	.	.	.	.	.	.	6726.3	.	.
2731	03OCT85	1922	17.4	7.8	436	0.5	1.2	.	3	.	-1	6726.9	.	.
2732	04OCT85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
2733	05OCT85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
2734	06OCT85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
2735	09OCT85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
2736	12OCT85	2032	16.9	7.9	452	0.6	1.1	.	3	.	11	.	.	.
2737	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
2738	18OCT85	1950	17.7	7.8	436	0.2	1.1	.	2	.	15	.	.	.
2739	23OCT85	1992	16.7	7.8	436	0.4	1.2	.	9	.	-1	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-5C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2740	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
2741	01NOV85	1980	17.0	8.0	452	0.4	1.1	.	9	.	25	6728.9	.	.
2742	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
2743	08NOV85	1982	16.3	7.8	448	0.3	1.2	.	9	.	10	.	.	.
2744	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
2745	16NOV85	1902	17.0	7.9	440	0.4	1.0	.	5	.	35	.	.	.
2746	22NOV85	1962	16.5	7.8	428	0.2	1.0	.	6	.	5	6729.3	.	.
2747	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.6	.	.
2748	29NOV85	1950	16.0	7.7	440	0.3	1.0	.	7	.	15	.	.	.
2749	04DEC85	1947	16.2	8.0	448	0.3	1.0	.	6	.	35	6729.2	.	.
2750	11DEC85	1515	16.8	7.7	440	0.3	1.1	.	6	.	19	.	.	.
2751	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
2752	17DEC85	1843	17.1	7.7	440	.	1.1	.	5	.	19	.	.	.
2753	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
2754	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
2755	26DEC85	1784	16.5	7.5	436	0.3	1.0	.	5	.	18	.	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-5S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2756	02JAN85	.	.	.	.	.	.	.	.	.	.	6717.2	.	.
2757	09JAN85	.	.	.	.	.	.	.	.	.	.	6717.1	.	.
2758	16JAN85	.	.	.	.	.	.	.	.	.	.	6717.2	.	.
2759	23JAN85	.	.	.	.	.	.	.	.	.	.	6717.1	.	.
2760	30JAN85	.	.	.	.	.	.	.	.	.	.	6717.2	.	.
2761	06FEB85	.	.	.	.	.	.	.	.	.	.	6717.1	.	.
2762	13FEB85	.	.	.	.	.	.	.	.	.	.	6717.1	.	.
2763	21FEB85	.	.	.	.	.	.	.	.	.	.	6716.8	.	.
2764	27FEB85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
2765	06MAR85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
2766	14MAR85	.	.	.	.	.	.	.	.	.	.	6719.3	.	.
2767	20MAR85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
2768	28MAR85	.	.	.	.	.	.	.	.	.	.	6722.0	.	.
2769	09APR85	.	.	.	.	.	.	.	.	.	.	6723.5	.	.
2770	18APR85	.	.	.	.	.	.	.	.	.	.	6724.4	.	.
2771	25APR85	.	.	.	.	.	.	.	.	.	.	6726.2	.	.
2772	01MAY85	.	.	.	.	.	.	.	.	.	.	6726.6	.	.
2773	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
2774	15MAY85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
2775	16MAY85	.	.	.	.	.	.	.	.	.	.	6718.7	.	.
2776	17MAY85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
2777	18MAY85	.	.	.	.	.	.	.	.	.	.	6732.1	.	.
2778	19MAY85	.	.	.	.	.	.	.	.	.	.	6734.1	.	.
2779	20MAY85	.	.	.	.	.	.	.	.	.	.	6736.4	.	.
2780	21MAY85	.	.	.	.	.	.	.	.	.	.	6737.2	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-5S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2781	22MAY85	.	.	.	.	.	.	.	.	.	.	6737.4	.	.
2782	23MAY85	.	.	.	.	.	.	.	.	.	.	6735.0	.	.
2783	24MAY85	.	.	.	.	.	.	.	.	.	.	6738.0	.	.
2784	25MAY85	.	.	.	.	.	.	.	.	.	.	6738.8	.	.
2785	26MAY85	.	.	.	.	.	.	.	.	.	.	6739.7	.	.
2786	27MAY85	.	.	.	.	.	.	.	.	.	.	6740.3	.	.
2787	28MAY85	.	.	.	.	.	.	.	.	.	.	6740.4	.	.
2788	29MAY85	.	.	.	.	.	.	.	.	.	.	6740.3	.	.
2789	30MAY85	.	.	.	.	.	.	.	.	.	.	6740.3	.	.
2790	31MAY85	.	.	.	.	.	.	.	.	.	.	6739.7	.	.
2791	01JUN85	.	.	.	.	.	.	.	.	.	.	6740.2	.	.
2792	02JUN85	.	.	.	.	.	.	.	.	.	.	6739.6	.	.
2793	03JUN85	.	.	.	.	.	.	.	.	.	.	6738.9	.	.
2794	04JUN85	.	.	.	.	.	.	.	.	.	.	6735.8	.	.
2795	05JUN85	.	.	.	.	.	.	.	.	.	.	6734.1	.	.
2796	06JUN85	.	.	.	.	.	.	.	.	.	.	6732.2	.	.
2797	07JUN85	.	.	.	.	.	.	.	.	.	.	6732.3	.	.
2798	08JUN85	.	.	.	.	.	.	.	.	.	.	6730.3	.	.
2799	09JUN85	.	.	.	.	.	.	.	.	.	.	6729.8	.	.
2800	10JUN85	.	.	.	.	.	.	.	.	.	.	6729.6	.	.
2801	11JUN85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
2802	12JUN85	.	.	.	.	.	.	.	.	.	.	6734.4	.	.
2803	13JUN85	.	.	.	.	.	.	.	.	.	.	6734.3	.	.
2804	19JUN85	.	.	.	.	.	.	.	.	.	.	6733.7	.	.
2805	26JUN85	.	.	.	.	.	.	.	.	.	.	6731.6	.	.
2806	03JUL85	.	.	.	.	.	.	.	.	.	.	6731.2	.	.
2807	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.4	.	.
2808	17JUL85	.	.	.	.	.	.	.	.	.	.	6730.2	.	.
2809	25JUL85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
2810	31JUL85	.	.	.	.	.	.	.	.	.	.	6735.0	.	.
2811	07AUG85	.	.	.	.	.	.	.	.	.	.	6733.5	.	.
2812	14AUG85	.	.	.	.	.	.	.	.	.	.	6733.1	.	.
2813	21AUG85	.	.	.	.	.	.	.	.	.	.	6730.1	.	.
2814	28AUG85	.	.	.	.	.	.	.	.	.	.	6730.8	.	.
2815	04SEP85	.	.	.	.	.	.	.	.	.	.	6726.9	.	.
2816	12SEP85	.	.	.	.	.	.	.	.	.	.	6732.6	.	.
2817	18SEP85	.	.	.	.	.	.	.	.	.	.	6733.4	.	.
2818	25SEP85	.	.	.	.	.	.	.	.	.	.	6732.7	.	.
2819	01OCT85	.	.	.	.	.	.	.	.	.	.	6730.7	.	.
2820	02OCT85	.	.	.	.	.	.	.	.	.	.	6730.5	.	.
2821	03OCT85	.	.	.	.	.	.	.	.	.	.	6730.9	.	.
2822	04OCT85	.	.	.	.	.	.	.	.	.	.	6730.9	.	.
2823	05OCT85	.	.	.	.	.	.	.	.	.	.	6731.1	.	.
2824	06OCT85	.	.	.	.	.	.	.	.	.	.	6731.4	.	.
2825	09OCT85	.	.	.	.	.	.	.	.	.	.	6732.1	.	.
2826	16OCT85	.	.	.	.	.	.	.	.	.	.	6740.6	.	.
2827	24OCT85	.	.	.	.	.	.	.	.	.	.	6733.7	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-5S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2828	01NOV85	.	.	.	.	.	.	.	.	.	.	6732.4	.	.
2829	03NOV85	.	.	.	.	.	.	.	.	.	.	6732.0	.	.
2830	13NOV85	.	.	.	.	.	.	.	.	.	.	6732.3	.	.
2831	22NOV85	.	.	.	.	.	.	.	.	.	.	6734.1	.	.
2832	27NOV85	.	.	.	.	.	.	.	.	.	.	6734.2	.	.
2833	04DEC85	.	.	.	.	.	.	.	.	.	.	6735.2	.	.
2834	12DEC85	.	.	.	.	.	.	.	.	.	.	6732.2	.	.
2835	19DEC85	.	.	.	.	.	.	.	.	.	.	6730.4	.	.
2836	25DEC85	.	.	.	.	.	.	.	.	.	.	6730.5	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-6A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2837	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
2838	03JAN85	1819	14.9	7.3	.	.	1.0	-1	1	-0.1	25	.	.	.
2839	07JAN85	1790	12.8	7.3	.	.	0.9	-1	1	-0.1	22	.	.	.
2840	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.7	.	.
2841	14JAN85	1710	13.1	7.3	.	-1	1.0	-1	1	.	22	.	.	.
2842	16JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
2843	21JAN85	1762	12.3	7.4	.	-1	1.0	-1	2	-0.1	25	.	.	.
2844	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
2845	28JAN85	1828	.	7.2	.	-1	1.0	-1	2	-0.1	22	.	.	.
2846	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
2847	04FEB85	1793	12.7	7.3	.	-1	0.9	-1	1	-0.1	18	.	.	.
2848	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
2849	11FEB85	1868	13.4	7.3	.	-1	1.1	-1	1	-0.1	30	.	.	.
2850	13FEB85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
2851	18FEB85	1809	13.4	7.2	.	-1	1.1	-1	1	-0.1	8	.	.	.
2852	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
2853	25FEB85	1725	13.5	7.2	.	-1	1.1	-1	1	-0.1	20	.	.	.
2854	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
2855	04MAR85	1708	13.0	7.2	.	-1	1.0	-1	-1	-0.1	15	.	.	.
2856	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
2857	11MAR85	1893	12.9	7.4	.	-1	1.0	-1	2	-0.1	20	.	.	.
2858	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.8	.	.
2859	18MAR85	1931	13.0	7.2	.	-1	0.7	-1	1	-0.1	18	.	.	.
2860	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.0	.	.
2861	25MAR85	1819	13.5	7.3	.	-1	0.8	-1	-1	-0.1	18	.	.	.
2862	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.6	.	.
2863	01APR85	1824	13.2	7.2	.	-1	1.0	-1	1	-0.1	15	.	.	.
2864	08APR85	1820	13.5	7.3	.	-1	0.7	-1	1	-0.1	18	.	.	.
2865	09APR85	.	.	.	.	.	.	.	.	.	.	6721.3	.	.
2866	15APR85	1915	13.4	7.3	.	-1	0.8	-1	-1	-0.1	20	.	.	.
2867	18APR85	.	.	.	.	.	.	.	.	.	.	6723.2	.	.
2868	23APR85	1915	13.1	7.4	458	-1	0.7	-1	-1	-0.1	18	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-6A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2869	25APR85	.	.	.	.	.	.	.	.	.	.	6724.6	.	.
2870	29APR85	1832	13.2	7.3	450	-1.0	0.8	-1	-1	-0.1	18	.	.	.
2871	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.0	.	.
2872	06MAY85	1836	13.4	7.2	452	-1.0	0.8	-1	-1	-0.1	28	.	.	.
2873	08MAY85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
2874	13MAY85	1785	13.2	7.3	452	-1.0	0.6	-1	-1	-0.1	15	.	.	.
2875	15MAY85	.	.	.	.	.	.	.	.	.	.	6709.2	.	.
2876	16MAY85	.	.	.	.	.	.	.	.	.	.	6680.6	.	.
2877	17MAY85	.	.	.	.	.	.	.	.	.	.	6661.2	.	.
2878	18MAY85	.	.	.	.	.	.	.	.	.	.	6655.1	.	.
2879	19MAY85	.	.	.	.	.	.	.	.	.	.	6641.5	.	.
2880	20MAY85	1852	14.0	7.6	.	-1.0	.	.	1	.	.	6682.3	.	.
2881	21MAY85	.	.	.	.	.	.	.	.	.	.	6636.1	.	.
2882	22MAY85	1948	14.1	7.3	.	-1.0	.	.	-1	.	.	6648.9	.	.
2883	23MAY85	.	.	.	.	.	.	.	.	.	.	6648.7	.	.
2884	24MAY85	.	.	.	.	.	.	.	.	.	.	6624.4	.	.
2885	25MAY85	.	.	.	.	.	.	.	.	.	.	6615.0	.	.
2886	26MAY85	.	.	.	.	.	.	.	.	.	.	6607.3	.	.
2887	27MAY85	.	.	.	.	.	.	.	.	.	.	6600.6	.	.
2888	28MAY85	1794	15.5	7.3	.	-1.0	.	.	2	.	.	6603.7	.	.
2889	29MAY85	.	.	.	.	.	.	.	.	.	.	6595.3	.	.
2890	30MAY85	1847	14.0	7.4	458	-1.0	1.2	-1	1	-0.1	18	6587.2	.	.
2891	31MAY85	.	.	.	.	.	.	.	.	.	.	6581.6	.	.
2892	01JUN85	.	.	.	.	.	.	.	.	.	.	6580.1	.	.
2893	02JUN85	.	.	.	.	.	.	.	.	.	.	6649.1	.	.
2894	03JUN85	1731	13.8	7.4	.	0.4	.	.	2	.	.	6666.8	.	.
2895	04JUN85	.	.	.	.	.	.	.	.	.	.	6682.0	.	.
2896	05JUN85	.	.	.	.	.	.	.	.	.	.	6688.3	.	.
2897	06JUN85	.	.	.	.	.	.	.	.	.	.	6692.8	.	.
2898	07JUN85	.	.	.	.	.	.	.	.	.	.	6697.7	.	.
2899	08JUN85	.	.	.	.	.	.	.	.	.	.	6700.9	.	.
2900	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.4	.	.
2901	10JUN85	1642	13.1	7.3	.	-0.1	.	.	1	.	.	6704.6	.	.
2902	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.4	.	.
2903	13JUN85	.	.	.	.	.	.	.	.	.	.	6708.9	.	.
2904	18JUN85	1430	14.6	7.5	.	-0.1	1.2	-1	-1	-0.1	15	.	.	.
2905	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.3	.	.
2906	20JUN85	1622	13.5	7.4	.	0.1	1.2	-1	-1	-0.1	18	.	.	.
2907	25JUN85	1632	12.8	7.4	.	-0.1	1.0	-1	-1	-0.1	20	.	.	.
2908	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.4	.	.
2909	28JUN85	1688	13.3	7.4	.	-0.1	.	-1	-1	-0.1	17	.	.	.
2910	02JUL85	1650	13.2	7.4	456	-0.1	.	.	-1	.	7	.	.	.
2911	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.4	.	.
2912	05JUL85	1663	14.5	7.4	420	-0.1	.	.	-1	.	17	.	.	.
2913	09JUL85	1670	13.8	7.3	472	-0.1	0.7	-1	-1	.	7	.	.	.
2914	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.1	.	.
2915	14JUL85	1681	14.0	7.5	428	0.5	0.7	.	2	-0.1	20	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-6A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2916	16JUL85	1639	12.9	7.4	440	-0.1	0.7	-1	-1	-0.1	21	.	.	.
2917	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.1	.	.
2918	19JUL85	1693	13.4	7.5	424	0.2	0.5	-1	-1	-0.1	25	.	.	.
2919	24JUL85	1782	13.1	7.4	440	0.1	0.5	-1	-1	-0.1	18	.	.	.
2920	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.4	.	.
2921	27JUL85	1670	13.1	7.4	440	0.4	0.5	-1	-1	-0.1	11	.	.	.
2922	30JUL85	1543	13.0	7.4	448	0.4	0.5	-1	-1	-0.1	20	.	.	.
2923	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.7	.	.
2924	02AUG85	1680	13.1	7.4	432	0.2	0.5	-1	-1	-0.1	5	.	.	.
2925	06AUG85	1737	13.2	7.4	424	0.3	0.5	-1	-1	-0.1	-1	.	.	.
2926	07AUG85	.	.	.	.	.	.	.	.	.	.	6724.8	.	.
2927	10AUG85	1729	12.8	7.4	440	-0.1	0.5	-1	-1	-0.1	5	.	.	.
2928	13AUG85	1766	13.2	7.4	420	0.2	0.5	-1	-1	-0.1	12	.	.	.
2929	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
2930	16AUG85	1693	13.2	7.4	420	-0.1	0.5	-1	-1	-0.1	3	.	.	.
2931	20AUG85	1616	13.4	7.4	440	-0.1	0.6	.	-1	-0.1	8	.	.	.
2932	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.2	.	.
2933	23AUG85	1676	12.0	7.5	428	0.4	0.5	-1	-1	-0.1	-1	.	.	.
2934	28AUG85	1636	13.4	7.0	424	0.2	0.5	-1	-1	-0.1	5	6726.4	.	.
2935	04SEP85	1737	14.0	7.3	432	-0.1	0.7	-1	-1	-0.1	16	6726.8	.	.
2936	11SEP85	1710	12.8	7.3	460	-0.1	0.6	.	-1	.	12	.	.	.
2937	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
2938	18SEP85	1652	13.3	7.3	440	-0.1	0.6	.	-1	.	12	6727.7	.	.
2939	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
2940	28SEP85	1580	12.5	7.6	424	-0.1	0.6	.	-1	.	25	.	.	.
2941	010CT85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
2942	020CT85	.	.	.	.	.	.	.	.	.	.	6726.0	.	.
2943	030CT85	1670	13.9	7.3	428	0.2	0.6	.	-1	.	18	6726.7	.	.
2944	040CT85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
2945	050CT85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
2946	060CT85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
2947	090CT85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
2948	120CT85	1676	11.3	7.7	425	0.3	0.6	.	-1	.	5	.	.	.
2949	160CT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
2950	180CT85	1650	12.3	7.4	424	-0.1	0.6	.	-1	.	15	.	.	.
2951	230CT85	1693	12.5	7.4	432	0.1	0.6	.	1	.	15	.	.	.
2952	240CT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
2953	01NOV85	1725	12.6	7.6	424	0.2	0.6	.	-1	.	28	6728.6	.	.
2954	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
2955	08NOV85	1733	12.3	7.6	412	-0.1	0.6	.	-1	.	10	.	.	.
2956	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
2957	16NOV85	1691	12.5	7.6	460	0.2	0.5	.	-1	.	20	.	.	.
2958	22NOV85	1690	12.2	7.5	456	-0.1	0.5	.	-1	.	5	6729.0	.	.
2959	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
2960	29NOV85	1720	12.0	7.2	420	-0.1	0.5	.	1	.	22	.	.	.
2961	04DEC85	1689	12.4	7.9	432	-0.1	0.5	.	-1	.	15	6728.8	.	.
2962	11DEC85	1385	12.6	7.4	412	-0.1	0.6	.	-1	.	25	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-6A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2963	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
2964	17DEC85	1716	12.6	7.4	428	.	0.6	.	-1	.	36	.	.	.
2965	19DEC85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
2966	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
2967	26DEC85	1632	13.0	7.3	424	-0.1	0.5	.	-1	.	23	.	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-6B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
2968	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.
2969	03JAN85	2665	15.0	7.3	.	.	1.4	-1	31	-0.1	22	.	.	.
2970	07JAN85	2670	15.0	7.4	.	.	1.2	-1	34	-0.1	22	.	.	.
2971	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.6	.	.
2972	14JAN85	2515	15.3	7.4	.	2.3	1.4	-1	33	.	20	.	.	.
2973	16JAN85	.	.	.	.	.	.	.	.	.	.	6714.8	.	.
2974	21JAN85	2741	15.2	7.4	.	2.5	1.5	-1	44	-0.1	28	.	.	.
2975	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
2976	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
2977	04FEB85	2739	15.4	7.3	.	2.8	1.5	-1	41	-0.1	18	.	.	.
2978	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
2979	11FEB85	2780	15.6	7.3	.	1.9	1.5	-1	44	-0.1	25	.	.	.
2980	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
2981	18FEB85	2655	15.7	7.3	.	1.7	1.6	-1	38	-0.1	10	.	.	.
2982	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
2983	25FEB85	2426	15.0	7.2	.	1.3	1.5	-1	24	-0.1	18	.	.	.
2984	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
2985	04MAR85	2645	15.0	7.2	.	2.1	1.5	-1	50	-0.1	15	.	.	.
2986	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
2987	11MAR85	2712	15.6	7.4	.	2.4	1.4	-1	51	-0.1	18	.	.	.
2988	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.6	.	.
2989	18MAR85	2798	15.4	7.3	.	2.3	1.3	-1	55	-0.1	20	.	.	.
2990	20MAR85	.	.	.	.	.	.	.	.	.	.	6717.8	.	.
2991	25MAR85	2554	16.5	7.3	.	1.4	1.4	-1	30	-0.1	22	.	.	.
2992	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.5	.	.
2993	08APR85	2715	15.6	7.4	.	2.2	1.3	-1	60	-0.1	12	.	.	.
2994	09APR85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
2995	15APR85	2722	15.7	7.4	.	2.0	1.3	-1	52	-0.1	20	.	.	.
2996	18APR85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
2997	23APR85	2772	15.3	7.5	428	2.7	1.2	-1	54	-0.1	22	.	.	.
2998	25APR85	.	.	.	.	.	.	.	.	.	.	6724.5	.	.
2999	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.2	.	.
3000	06MAY85	2652	15.6	7.3	414	1.8	1.3	-1	55	-0.1	25	.	.	.
3001	08MAY85	.	.	.	.	.	.	.	.	.	.	6726.6	.	.
3002	13MAY85	2678	15.4	7.3	420	2.1	1.0	-1	45	-0.1	22	.	.	.
3003	15MAY85	.	.	.	.	.	.	.	.	.	.	6704.2	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-6B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3004	16MAY85	.	.	.	.	.	.	.	.	.	.	6672.9	.	.
3005	17MAY85	.	.	.	.	.	.	.	.	.	.	6656.5	.	.
3006	18MAY85	.	.	.	.	.	.	.	.	.	.	6644.3	.	.
3007	19MAY85	.	.	.	.	.	.	.	.	.	.	6628.6	.	.
3008	20MAY85	2459	16.9	7.3	.	-1.0	.	.	25	.	.	6619.5	.	.
3009	21MAY85	.	.	.	.	.	.	.	.	.	.	6625.6	.	.
3010	22MAY85	2409	16.9	7.4	.	2.8	.	.	11	.	.	6642.6	.	.
3011	23MAY85	.	.	.	.	.	.	.	.	.	.	6648.1	.	.
3012	24MAY85	.	.	.	.	.	.	.	.	.	.	6611.4	.	.
3013	25MAY85	.	.	.	.	.	.	.	.	.	.	6600.5	.	.
3014	26MAY85	.	.	.	.	.	.	.	.	.	.	6591.5	.	.
3015	27MAY85	.	.	.	.	.	.	.	.	.	.	6583.5	.	.
3016	28MAY85	2276	17.5	7.3	.	1.2	.	.	4	.	.	6588.9	.	.
3017	29MAY85	.	.	.	.	.	.	.	.	.	.	6577.0	.	.
3018	30MAY85	2226	16.9	7.4	488	-1.0	1.6	-1	4	-0.1	.	6565.1	.	.
3019	31MAY85	.	.	.	.	.	.	.	.	.	.	6557.1	.	.
3020	01JUN85	.	.	.	.	.	.	.	.	.	.	6554.7	.	.
3021	02JUN85	.	.	.	.	.	.	.	.	.	.	6649.0	.	.
3022	03JUN85	2277	15.9	7.3	.	0.1	.	.	-1	.	.	6667.4	.	.
3023	04JUN85	.	.	.	.	.	.	.	.	.	.	6682.4	.	.
3024	05JUN85	.	.	.	.	.	.	.	.	.	.	6688.5	.	.
3025	06JUN85	.	.	.	.	.	.	.	.	.	.	6692.8	.	.
3026	07JUN85	.	.	.	.	.	.	.	.	.	.	6697.9	.	.
3027	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.1	.	.
3028	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.5	.	.
3029	10JUN85	2244	15.7	7.3	.	0.2	.	.	4	.	.	6704.6	.	.
3030	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.4	.	.
3031	13JUN85	.	.	.	.	.	.	.	.	.	.	6708.9	.	.
3032	18JUN85	2024	15.6	7.4	.	0.3	1.6	-1	3	-0.1	30	.	.	.
3033	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.2	.	.
3034	20JUN85	2144	15.5	7.4	.	0.4	1.7	-1	3	-0.1	15	.	.	.
3035	25JUN85	2244	15.2	7.4	.	0.1	1.4	-1	3	-0.1	20	.	.	.
3036	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
3037	28JUN85	2303	15.9	7.4	.	0.5	.	-1	4	-0.1	15	.	.	.
3038	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.2	.	.
3039	05JUL85	2213	15.5	7.4	468	0.2	.	.	3	.	14	.	.	.
3040	09JUL85	2226	16.3	7.3	480	0.2	0.9	-1	-1	.	12	.	.	.
3041	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.0	.	.
3042	14JUL85	2396	15.0	7.4	500	0.8	0.9	.	4	-0.1	20	.	.	.
3043	16JUL85	2295	15.2	7.4	500	0.2	1.0	-1	2	-0.1	22	.	.	.
3044	17JUL85	.	.	.	.	.	.	.	.	.	.	6720.9	.	.
3045	19JUL85	2290	15.0	7.4	472	0.4	0.8	-1	3	-0.1	25	.	.	.
3046	24JUL85	2435	15.3	7.4	508	0.4	0.8	-1	3	-0.1	15	.	.	.
3047	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.3	.	.
3048	27JUL85	2378	15.2	7.4	484	0.6	0.8	-1	2	-0.1	8	.	.	.
3049	30JUL85	2310	15.3	7.4	504	0.6	0.8	-1	2	-0.1	15	.	.	.
3050	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.6	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-6B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3051	02AUG85	2300	15.7	7.3	512	0.4	0.8	-1	2	-0.1	-1	.	.	.
3052	06AUG85	2359	15.4	7.4	488	0.4	0.8	-1	2	-0.1	-1	.	.	.
3053	07AUG85	.	.	.	.	.	.	.	.	.	.	6724.7	.	.
3054	10AUG85	2223	14.9	7.4	484	0.5	0.8	-1	2	-0.1	3	.	.	.
3055	13AUG85	2387	15.6	7.4	496	0.3	0.8	-1	2	-0.1	14	.	.	.
3056	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
3057	16AUG85	2390	15.1	7.4	484	0.3	0.8	-1	2	-0.1	-1	.	.	.
3058	20AUG85	2424	15.5	7.3	496	0.3	0.8	.	2	-0.1	20	.	.	.
3059	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.2	.	.
3060	23AUG85	2263	15.4	7.4	484	0.6	0.9	-1	2	-0.1	18	.	.	.
3061	28AUG85	2261	15.9	7.7	484	0.5	0.9	-1	1	-0.1	5	6726.3	.	.
3062	04SEP85	2374	15.0	7.3	492	0.3	1.0	-1	2	-0.1	28	6726.8	.	.
3063	11SEP85	2200	15.1	7.3	500	0.2	0.8	.	1	.	15	.	.	.
3064	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
3065	18SEP85	2290	15.3	7.3	508	0.3	0.9	.	3	.	12	6727.7	.	.
3066	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
3067	28SEP85	2400	14.9	7.5	488	0.3	0.9	.	1	.	15	.	.	.
3068	010CT85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
3069	020CT85	.	.	.	.	.	.	.	.	.	.	6726.2	.	.
3070	030CT85	2378	15.1	7.4	500	0.3	0.9	.	-1	.	12	6726.7	.	.
3071	040CT85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
3072	050CT85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
3073	060CT85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
3074	090CT85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
3075	120CT85	2357	14.8	7.5	500	0.5	0.9	.	-1	.	5	.	.	.
3076	160CT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
3077	180CT85	2309	15.0	7.4	488	0.9	0.9	.	-1	.	18	.	.	.
3078	230CT85	2351	14.6	7.4	492	0.4	0.9	.	5	.	15	.	.	.
3079	240CT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
3080	01NOV85	2360	15.0	7.6	500	0.4	0.9	.	4	.	18	6728.6	.	.
3081	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
3082	08NOV85	2410	14.5	7.5	500	0.2	0.9	.	5	.	22	.	.	.
3083	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
3084	16NOV85	2217	14.9	7.6	516	0.4	0.8	.	3	.	22	.	.	.
3085	22NOV85	2354	10.9	7.5	488	0.2	0.8	.	4	.	2	6729.0	.	.
3086	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
3087	29NOV85	2277	14.0	7.3	516	0.3	0.9	.	4	.	15	.	.	.
3088	04DEC85	2223	14.9	7.8	528	0.2	0.9	.	4	.	15	6728.8	.	.
3089	11DEC85	1909	14.8	7.3	492	0.2	0.9	.	4	.	24	.	.	.
3090	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
3091	17DEC85	2206	14.7	7.3	504	.	1.0	.	4	.	20	.	.	.
3092	19DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
3093	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
3094	26DEC85	2261	15.0	7.2	496	0.4	0.9	.	4	.	16	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-6C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3095	02JAN85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
3096	03JAN85	1384	15.1	7.7	.	.	2.2	-1	3	-0.1	27	.	.	.
3097	07JAN85	1400	15.1	7.8	.	.	2.0	-1	3	-0.1	20	.	.	.
3098	09JAN85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
3099	14JAN85	1400	15.6	7.7	.	-1	2.2	-1	3	.	18	.	.	.
3100	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
3101	21JAN85	1351	15.5	7.7	.	-1	2.4	-1	4	-0.1	22	.	.	.
3102	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
3103	30JAN85	.	.	.	.	.	.	.	.	.	.	6716.2	.	.
3104	04FEB85	1394	15.3	7.8	.	-1	2.2	-1	3	-0.1	15	.	.	.
3105	06FEB85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
3106	13FEB85	.	.	.	.	.	.	.	.	.	.	6716.2	.	.
3107	18FEB85	1367	16.0	7.7	.	-1	2.4	-1	3	-0.1	5	.	.	.
3108	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
3109	25FEB85	1391	15.5	7.6	.	-1	2.1	-1	3	-0.1	20	.	.	.
3110	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
3111	04MAR85	1378	15.0	7.7	.	-1	2.2	-1	3	-0.1	12	.	.	.
3112	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
3113	11MAR85	1328	15.8	7.8	.	-1	1.3	-1	3	-0.1	20	.	.	.
3114	14MAR85	.	.	.	.	.	.	.	.	.	.	6717.3	.	.
3115	18MAR85	1416	15.8	7.8	.	-1	2.2	-1	5	-0.1	20	.	.	.
3116	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.5	.	.
3117	25MAR85	1362	16.0	7.7	.	-1	2.4	-1	4	-0.1	18	.	.	.
3118	28MAR85	.	.	.	.	.	.	.	.	.	.	6720.1	.	.
3119	01APR85	1395	16.0	7.6	.	-1	2.8	-1	4	-0.1	22	.	.	.
3120	08APR85	1400	16.0	7.8	.	-1	2.2	-1	4	-0.1	28	.	.	.
3121	09APR85	.	.	.	.	.	.	.	.	.	.	6721.8	.	.
3122	15APR85	1421	16.2	7.8	.	-1	2.2	-1	4	-0.1	20	.	.	.
3123	18APR85	.	.	.	.	.	.	.	.	.	.	6723.7	.	.
3124	23APR85	1426	15.2	7.8	464	-1	2.1	-1	3	-0.1	20	.	.	.
3125	25APR85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
3126	29APR85	1361	16.0	7.7	456	-1	2.2	-1	3	-0.1	20	.	.	.
3127	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.9	.	.
3128	06MAY85	1377	15.9	7.7	456	-1	2.2	-1	3	.	22	.	.	.
3129	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
3130	13MAY85	1365	15.7	8.0	450	-1	1.8	-1	3	-0.1	20	.	.	.
3131	15MAY85	.	.	.	.	.	.	.	.	.	.	6703.0	.	.
3132	16MAY85	.	.	.	.	.	.	.	.	.	.	6671.3	.	.
3133	17MAY85	.	.	.	.	.	.	.	.	.	.	6645.6	.	.
3134	18MAY85	.	.	.	.	.	.	.	.	.	.	6641.8	.	.
3135	19MAY85	.	.	.	.	.	.	.	.	.	.	6622.0	.	.
3136	20MAY85	1338	17.2	8.6	.	-1	.	.	3	.	.	6613.8	.	.
3137	21MAY85	.	.	.	.	.	.	.	.	.	.	6621.9	.	.
3138	22MAY85	.	.	.	.	.	.	.	.	.	.	6642.3	.	.
3139	23MAY85	.	.	.	.	.	.	.	.	.	.	6645.1	.	.
3140	24MAY85	.	.	.	.	.	.	.	.	.	.	6611.2	.	.
3141	25MAY85	.	.	.	.	.	.	.	.	.	.	6600.5	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-6C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3142	26MAY85	.	.	.	.	.	.	.	.	.	.	6590.8	.	.
3143	27MAY85	.	.	.	.	.	.	.	.	.	.	6582.7	.	.
3144	28MAY85	1333	17.5	8.1	.	-1.0	.	.	2	.	.	6588.5	.	.
3145	29MAY85	.	.	.	.	.	.	.	.	.	.	6575.6	.	.
3146	30MAY85	1417	17.3	8.0	464	-1.0	2.4	-1	2	-0.1	15	6564.4	.	.
3147	31MAY85	.	.	.	.	.	.	.	.	.	.	6555.9	.	.
3148	01JUN85	.	.	.	.	.	.	.	.	.	.	6553.5	.	.
3149	02JUN85	.	.	.	.	.	.	.	.	.	.	6657.7	.	.
3150	03JUN85	1518	16.9	8.0	.	0.3	.	.	2	.	.	6668.5	.	.
3151	04JUN85	.	.	.	.	.	.	.	.	.	.	6683.6	.	.
3152	05JUN85	.	.	.	.	.	.	.	.	.	.	6689.7	.	.
3153	06JUN85	.	.	.	.	.	.	.	.	.	.	6694.1	.	.
3154	07JUN85	.	.	.	.	.	.	.	.	.	.	6698.4	.	.
3155	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.7	.	.
3156	09JUN85	.	.	.	.	.	.	.	.	.	.	6704.4	.	.
3157	10JUN85	1530	16.7	8.1	.	0.1	.	.	3	.	.	6705.4	.	.
3158	11JUN85	.	.	.	.	.	.	.	.	.	.	6707.1	.	.
3159	13JUN85	.	.	.	.	.	.	.	.	.	.	6709.6	.	.
3160	20JUN85	1566	15.5	8.1	.	0.2	2.4	-1	2	-0.1	18	.	.	.
3161	25JUN85	1550	16.1	8.0	.	-0.1	2.1	-1	2	-0.1	20	.	.	.
3162	26JUN85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
3163	28JUN85	1609	16.3	8.0	.	0.4	.	-1	2	-0.1	17	.	.	.
3164	02JUL85	1582	16.5	8.1	450	0.1	.	.	1	.	16	.	.	.
3165	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.9	.	.
3166	05JUL85	1599	17.0	8.0	419	0.2	.	.	2	.	6	.	.	.
3167	08JUL85	1551	17.1	8.0	444	0.2	1.5	-1	-1	.	23	.	.	.
3168	11JUL85	.	.	.	.	.	.	.	.	.	.	6721.7	.	.
3169	14JUL85	1576	15.5	8.2	440	0.7	1.5	.	3	-0.1	20	.	.	.
3170	16JUL85	1622	16.3	8.0	430	-0.1	1.5	-1	1	-0.1	23	.	.	.
3171	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.5	.	.
3172	19JUL85	1593	15.0	8.1	436	0.3	1.4	-1	2	-0.1	20	.	.	.
3173	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.9	.	.
3174	27JUL85	1518	15.9	8.2	440	0.6	1.3	-1	-1	-0.1	-1	.	.	.
3175	30JUL85	1596	15.9	8.2	460	0.4	1.3	-1	-1	-0.1	-1	.	.	.
3176	31JUL85	.	.	.	.	.	.	.	.	.	.	6724.2	.	.
3177	02AUG85	1566	16.7	8.1	444	0.2	1.4	-1	-1	-0.1	2	.	.	.
3178	06AUG85	1616	16.0	8.0	396	0.2	1.2	-1	-1	-0.1	5	.	.	.
3179	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.4	.	.
3180	10AUG85	1640	16.1	8.1	440	0.3	1.4	-1	-1	-0.1	3	.	.	.
3181	13AUG85	1661	16.0	8.0	436	0.1	1.3	-1	-1	-0.1	-1	.	.	.
3182	14AUG85	.	.	.	.	.	.	.	.	.	.	6726.2	.	.
3183	16AUG85	1620	15.9	8.1	460	0.3	1.4	-1	-1	-0.1	-1	.	.	.
3184	20AUG85	1595	16.5	8.1	456	0.2	1.4	.	-1	-0.1	-1	.	.	.
3185	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.9	.	.
3186	23AUG85	1609	16.0	8.1	448	0.4	1.4	-1	-1	-0.1	8	.	.	.
3187	28AUG85	1480	16.0	8.3	440	0.4	1.4	-1	-1	-0.1	8	6726.9	.	.
3188	04SEP85	1653	16.5	8.1	440	0.2	1.6	-1	-1	-0.1	15	6727.4	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-6C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3189	11SEP85	1650	16.2	7.9	448	0.1	1.4	.	-1	.	10	.	.	.
3190	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
3191	18SEP85	1474	16.0	8.0	456	0.1	1.5	.	1	.	10	6728.1	.	.
3192	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
3193	28SEP85	1620	15.5	8.0	440	0.2	1.5	.	-1	.	15	.	.	.
3194	01OCT85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
3195	02OCT85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
3196	03OCT85	1622	16.0	8.1	456	0.4	1.5	.	-1	.	12	6727.2	.	.
3197	04OCT85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
3198	05OCT85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
3199	06OCT85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
3200	09OCT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
3201	12OCT85	1625	15.7	8.2	436	0.4	1.6	.	-1	.	3	.	.	.
3202	16OCT85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
3203	18OCT85	1640	16.0	8.1	460	-0.1	1.5	.	-1	.	15	.	.	.
3204	23OCT85	1603	14.0	8.0	425	0.2	1.5	.	3	.	20	.	.	.
3205	24OCT85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
3206	01NOV85	1670	15.8	8.2	456	0.2	1.5	.	2	.	20	6729.2	.	.
3207	03NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
3208	08NOV85	1594	15.1	8.1	452	0.1	1.5	.	3	.	20	.	.	.
3209	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
3210	16NOV85	1563	16.0	8.2	448	0.2	1.3	.	2	.	22	.	.	.
3211	22NOV85	1584	15.4	8.1	440	0.1	1.3	.	2	.	18	6729.6	.	.
3212	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.9	.	.
3213	29NOV85	1580	14.5	8.0	460	-0.1	1.4	.	2	.	50	.	.	.
3214	04DEC85	1623	15.1	8.3	456	0.2	1.4	.	2	.	32	6729.5	.	.
3215	11DEC85	1268	15.6	8.2	436	0.1	1.5	.	2	.	22	.	.	.
3216	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
3217	17DEC85	1498	15.3	8.1	440	.	1.6	.	2	.	15	.	.	.
3218	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
3219	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
3220	26DEC85	1435	16.0	7.9	440	0.1	1.5	.	2	.	14	.	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-6S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3221	02JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
3222	09JAN85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
3223	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
3224	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
3225	30JAN85	.	.	.	.	.	.	.	.	.	.	6716.1	.	.
3226	06FEB85	.	.	.	.	.	.	.	.	.	.	6716.2	.	.
3227	13FEB85	.	.	.	.	.	.	.	.	.	.	6716.2	.	.
3228	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
3229	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-6S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3230	06MAR85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.
3231	14MAR85	.	.	.	.	.	.	.	.	.	.	6752.9	.	.
3232	20MAR85	.	.	.	.	.	.	.	.	.	.	6753.2	.	.
3233	28MAR85	.	.	.	.	.	.	.	.	.	.	6745.4	.	.
3234	09APR85	.	.	.	.	.	.	.	.	.	.	6741.7	.	.
3235	18APR85	.	.	.	.	.	.	.	.	.	.	6739.0	.	.
3236	25APR85	.	.	.	.	.	.	.	.	.	.	6772.5	.	.
3237	01MAY85	.	.	.	.	.	.	.	.	.	.	6771.7	.	.
3238	08MAY85	.	.	.	.	.	.	.	.	.	.	6767.0	.	.
3239	15MAY85	.	.	.	.	.	.	.	.	.	.	6755.7	.	.
3240	16MAY85	.	.	.	.	.	.	.	.	.	.	6745.9	.	.
3241	17MAY85	.	.	.	.	.	.	.	.	.	.	6760.4	.	.
3242	18MAY85	.	.	.	.	.	.	.	.	.	.	6763.8	.	.
3243	19MAY85	.	.	.	.	.	.	.	.	.	.	6766.4	.	.
3244	20MAY85	.	.	.	.	.	.	.	.	.	.	6768.6	.	.
3245	21MAY85	.	.	.	.	.	.	.	.	.	.	6764.7	.	.
3246	22MAY85	.	.	.	.	.	.	.	.	.	.	6771.0	.	.
3247	23MAY85	.	.	.	.	.	.	.	.	.	.	6770.1	.	.
3248	24MAY85	.	.	.	.	.	.	.	.	.	.	6765.9	.	.
3249	25MAY85	.	.	.	.	.	.	.	.	.	.	6764.6	.	.
3250	26MAY85	.	.	.	.	.	.	.	.	.	.	6765.2	.	.
3251	27MAY85	.	.	.	.	.	.	.	.	.	.	6765.9	.	.
3252	28MAY85	.	.	.	.	.	.	.	.	.	.	6765.5	.	.
3253	29MAY85	.	.	.	.	.	.	.	.	.	.	6764.5	.	.
3254	30MAY85	.	.	.	.	.	.	.	.	.	.	6763.4	.	.
3255	31MAY85	.	.	.	.	.	.	.	.	.	.	6763.6	.	.
3256	01JUN85	.	.	.	.	.	.	.	.	.	.	6764.9	.	.
3257	02JUN85	.	.	.	.	.	.	.	.	.	.	6791.0	.	.
3258	03JUN85	.	.	.	.	.	.	.	.	.	.	6789.6	.	.
3259	04JUN85	.	.	.	.	.	.	.	.	.	.	6786.0	.	.
3260	05JUN85	.	.	.	.	.	.	.	.	.	.	6782.7	.	.
3261	06JUN85	.	.	.	.	.	.	.	.	.	.	6780.0	.	.
3262	07JUN85	.	.	.	.	.	.	.	.	.	.	6777.2	.	.
3263	08JUN85	.	.	.	.	.	.	.	.	.	.	6767.0	.	.
3264	09JUN85	.	.	.	.	.	.	.	.	.	.	6758.7	.	.
3265	10JUN85	.	.	.	.	.	.	.	.	.	.	6751.8	.	.
3266	11JUN85	.	.	.	.	.	.	.	.	.	.	6748.1	.	.
3267	13JUN85	.	.	.	.	.	.	.	.	.	.	6748.3	.	.
3268	19JUN85	.	.	.	.	.	.	.	.	.	.	6739.4	.	.
3269	26JUN85	.	.	.	.	.	.	.	.	.	.	6741.4	.	.
3270	03JUL85	.	.	.	.	.	.	.	.	.	.	6740.9	.	.
3271	11JUL85	.	.	.	.	.	.	.	.	.	.	6722.1	.	.
3272	17JUL85	.	.	.	.	.	.	.	.	.	.	6742.1	.	.
3273	25JUL85	.	.	.	.	.	.	.	.	.	.	6760.3	.	.
3274	31JUL85	.	.	.	.	.	.	.	.	.	.	6780.1	.	.
3275	07AUG85	.	.	.	.	.	.	.	.	.	.	6769.3	.	.
3276	14AUG85	.	.	.	.	.	.	.	.	.	.	6757.6	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-6S

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3277	21AUG85	.	.	.	.	.	.	.	.	.	.	6749.4	.	.
3278	28AUG85	.	.	.	.	.	.	.	.	.	.	6748.8	.	.
3279	04SEP85	.	.	.	.	.	.	.	.	.	.	6748.2	.	.
3280	12SEP85	.	.	.	.	.	.	.	.	.	.	6747.7	.	.
3281	18SEP85	.	.	.	.	.	.	.	.	.	.	6748.0	.	.
3282	25SEP85	.	.	.	.	.	.	.	.	.	.	6748.3	.	.
3283	010CT85	.	.	.	.	.	.	.	.	.	.	6744.7	.	.
3284	020CT85	.	.	.	.	.	.	.	.	.	.	6745.9	.	.
3285	030CT85	.	.	.	.	.	.	.	.	.	.	6746.6	.	.
3286	040CT85	.	.	.	.	.	.	.	.	.	.	6746.5	.	.
3287	050CT85	.	.	.	.	.	.	.	.	.	.	6746.8	.	.
3288	060CT85	.	.	.	.	.	.	.	.	.	.	6746.9	.	.
3289	090CT85	.	.	.	.	.	.	.	.	.	.	6750.2	.	.
3290	160CT85	.	.	.	.	.	.	.	.	.	.	6776.5	.	.
3291	240CT85	.	.	.	.	.	.	.	.	.	.	6774.6	.	.
3292	01NOV85	.	.	.	.	.	.	.	.	.	.	6760.3	.	.
3293	03NOV85	.	.	.	.	.	.	.	.	.	.	6757.3	.	.
3294	13NOV85	.	.	.	.	.	.	.	.	.	.	6757.4	.	.
3295	22NOV85	.	.	.	.	.	.	.	.	.	.	6761.1	.	.
3296	27NOV85	.	.	.	.	.	.	.	.	.	.	6763.8	.	.
3297	04DEC85	.	.	.	.	.	.	.	.	.	.	6759.1	.	.
3298	12DEC85	.	.	.	.	.	.	.	.	.	.	6757.8	.	.
3299	19DEC85	.	.	.	.	.	.	.	.	.	.	6754.8	.	.
3300	25DEC85	.	.	.	.	.	.	.	.	.	.	6752.1	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-7A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3301	02JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
3302	03JAN85	9225	29.8	12.4	.	.	1.0	-1	665	.	42	.	.	.
3303	07JAN85	9200	30.5	12.4	.	.	0.9	-1	670	.	50	.	.	.
3304	09JAN85	.	.	.	.	.	.	.	.	.	.	6715.8	.	.
3305	14JAN85	8800	29.6	12.4	.	8.0	1.3	-1	690	.	70	.	.	.
3306	16JAN85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.
3307	21JAN85	9007	30.2	12.4	.	7.0	1.2	-1	740	.	55	.	.	.
3308	23JAN85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
3309	28JAN85	9090	.	12.3	.	5.6	1.3	-1	630	.	50	.	.	.
3310	30JAN85	.	.	.	.	.	.	.	.	.	.	6716.7	.	.
3311	04FEB85	9462	30.4	12.4	.	7.6	1.2	-1	720	.	42	.	.	.
3312	06FEB85	.	.	.	.	.	.	.	.	.	.	6716.8	.	.
3313	11FEB85	9452	31.3	12.5	.	6.4	1.2	-1	740	.	60	.	.	.
3314	13FEB85	.	.	.	.	.	.	.	.	.	.	6716.7	.	.
3315	18FEB85	9363	30.9	12.5	.	6.0	1.2	-1	710	.	40	.	.	.
3316	21FEB85	.	.	.	.	.	.	.	.	.	.	6716.2	.	.
3317	25FEB85	9163	30.7	12.5	.	6.4	1.0	-1	680	.	48	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-7A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3318	27FEB85	.	.	.	.	.	.	.	.	.	.	6716.4	.	.
3319	04MAR85	10359	31.0	12.5	.	7.4	1.2	3	740	.	45	.	.	.
3320	06MAR85	.	.	.	.	.	.	.	.	.	.	6716.5	.	.
3321	11MAR85	10184	31.1	12.6	.	7.2	1.0	2	720	.	50	.	.	.
3322	14MAR85	.	.	.	.	.	.	.	.	.	.	6717.8	.	.
3323	18MAR85	9764	30.8	12.5	.	7.4	0.7	-1	725	.	55	.	.	.
3324	20MAR85	.	.	.	.	.	.	.	.	.	.	6719.0	.	.
3325	25MAR85	9576	30.5	12.5	.	7.2	0.9	-1	720	.	48	.	.	.
3326	28MAR85	.	.	.	.	.	.	.	.	.	.	6720.6	.	.
3327	01APR85	10515	30.7	12.6	.	7.2	0.9	1	760	.	42	.	.	.
3328	08APR85	9900	30.5	12.4	.	7.8	0.7	-1	740	.	50	.	.	.
3329	09APR85	.	.	.	.	.	.	.	.	.	.	6722.4	.	.
3330	15APR85	9576	30.3	12.5	.	8.4	0.7	1	740	.	58	.	.	.
3331	18APR85	.	.	.	.	.	.	.	.	.	.	6724.1	.	.
3332	23APR85	9638	30.2	12.4	2472	7.6	0.6	2	760	.	55	.	.	.
3333	25APR85	.	.	.	.	.	.	.	.	.	.	6725.4	.	.
3334	29APR85	9528	30.5	12.5	2448	7.0	0.7	3	740	0.2	72	.	.	.
3335	01MAY85	.	.	.	.	.	.	.	.	.	.	6726.3	.	.
3336	06MAY85	10098	30.2	12.5	2480	7.2	0.7	1	760	.	82	.	.	.
3337	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
3338	13MAY85	9870	30.5	12.1	2292	8.4	0.7	2	740	-0.1	52	.	.	.
3339	15MAY85	.	.	.	.	.	.	.	.	.	.	6705.6	.	.
3340	16MAY85	.	.	.	.	.	.	.	.	.	.	6673.3	.	.
3341	17MAY85	.	.	.	.	.	.	.	.	.	.	6649.9	.	.
3342	18MAY85	.	.	.	.	.	.	.	.	.	.	6645.1	.	.
3343	19MAY85	.	.	.	.	.	.	.	.	.	.	6629.5	.	.
3344	20MAY85	7306	28.1	11.8	1500	5.6	1.2	-1	540	-0.1	50	6619.5	.	.
3345	21MAY85	.	.	.	.	.	.	.	.	.	.	6625.2	.	.
3346	22MAY85	.	.	.	.	.	.	.	.	.	.	6641.7	.	.
3347	23MAY85	9347	27.7	12.6	2206	10.5	0.6	1	680	.	42	6647.5	.	.
3348	24MAY85	.	.	.	.	.	.	.	.	.	.	6608.5	.	.
3349	25MAY85	.	.	.	.	.	.	.	.	.	.	6597.1	.	.
3350	26MAY85	.	.	.	.	.	.	.	.	.	.	6587.2	.	.
3351	27MAY85	8422	24.0	12.6	1764	10.1	1.3	-1	530	.	40	6579.3	.	.
3352	28MAY85	.	.	.	.	.	.	.	.	.	.	6585.3	.	.
3353	29MAY85	9073	22.9	12.5	1848	6.6	1.3	-1	580	.	45	6572.5	.	.
3354	30MAY85	5886	20.1	12.1	1096	5.3	1.7	-1	385	-0.1	48	6560.8	.	.
3355	31MAY85	5390	19.3	12.0	956	5.2	2.0	-1	350	-0.1	48	6552.3	.	.
3356	01JUN85	9632	.	12.7	2288	3.4	0.9	-1	650	.	40	6549.7	.	.
3357	02JUN85	6516	17.0	12.5	1280	1.5	0.8	-1	310	.	30	6626.6	.	.
3358	03JUN85	7185	19.2	12.5	1572	3.3	0.7	-1	380	.	45	6656.3	.	.
3359	04JUN85	6955	20.9	12.5	1468	2.4	0.7	-1	360	.	32	6677.7	.	.
3360	05JUN85	6380	21.5	12.4	1316	2.4	0.7	-1	290	.	32	6685.2	.	.
3361	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.2	.	.
3362	07JUN85	3062	21.0	12.0	476	0.5	.	-1	82	.	13	6698.5	.	.
3363	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.7	.	.
3364	09JUN85	.	.	.	.	.	.	.	.	.	.	6704.2	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-7A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3365	10JUN85	2958	21.5	11.9	460	0.3	0.7	-1	84	.	20	6705.2	.	.
3366	11JUN85	1749	21.2	10.3	.	0.3	.	.	82	.	.	6707.1	.	.
3367	12JUN85	.	.	.	.	.	.	.	.	.	.	6708.3	.	.
3368	13JUN85	2380	21.5	11.4	200	0.6	.	-1	80	-0.1	12	6709.4	.	.
3369	18JUN85	1923	21.5	10.4	.	0.5	0.6	-1	78	-0.1	12	.	.	.
3370	19JUN85	.	.	.	.	.	.	.	.	.	.	6714.3	.	.
3371	20JUN85	4224	22.0	12.2	.	0.5	0.8	-1	94	.	-1	.	.	.
3372	25JUN85	1785	21.5	12.1	.	0.3	0.8	-1	88	.	15	.	.	.
3373	26JUN85	.	.	.	.	.	.	.	.	.	.	6717.2	.	.
3374	28JUN85	1982	22.5	10.2	.	0.7	.	-1	65	-0.1	7	.	.	.
3375	02JUL85	4613	22.5	12.1	724	0.4	.	.	99	.	6	.	.	.
3376	03JUL85	.	.	.	.	.	.	.	.	.	.	6719.1	.	.
3377	05JUL85	2689	24.0	11.6	678	0.4	.	.	9	.	7	.	.	.
3378	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.9	.	.
3379	19JUL85	4083	22.7	12.1	572	0.6	0.3	-1	118	-0.1	25	.	.	.
3380	24JUL85	3935	22.8	12.1	580	0.7	0.4	-1	120	.	23	.	.	.
3381	25JUL85	.	.	.	.	.	.	.	.	.	.	6724.2	.	.
3382	27JUL85	3238	22.9	12.0	320	0.8	0.3	-1	110	-0.1	15	.	.	.
3383	30JUL85	4930	22.7	12.2	896	0.4	2.2	-1	140	-0.1	15	.	.	.
3384	31JUL85	.	.	.	.	.	.	.	.	.	.	6724.4	.	.
3385	02AUG85	3677	22.7	12.0	436	0.8	0.4	-1	120	.	-1	.	.	.
3386	06AUG85	3030	22.8	11.8	368	0.9	0.4	-1	102	.	-1	.	.	.
3387	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
3388	10AUG85	3300	22.8	11.8	336	0.8	0.4	-1	122	.	-1	.	.	.
3389	13AUG85	3233	22.8	11.8	808	0.7	0.4	-1	101	.	14	.	.	.
3390	14AUG85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
3391	20AUG85	4242	23.1	12.0	512	0.6	0.4	.	140	-0.1	8	.	.	.
3392	21AUG85	.	.	.	.	.	.	.	.	.	.	6724.1	.	.
3393	23AUG85	3470	23.2	12.0	440	0.8	0.4	-1	128	.	5	.	.	.
3394	28AUG85	3124	22.3	11.8	280	0.9	0.4	-1	120	.	3	6727.2	.	.
3395	04SEP85	3829	22.5	12.1	548	0.6	0.5	-1	125	-0.1	19	.	.	.
3396	05SEP85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
3397	12SEP85	3321	22.0	11.6	348	0.6	0.5	.	130	.	12	6728.1	.	.
3398	20SEP85	3900	23.0	11.1	624	0.6	0.4	.	130	.	20	6728.3	.	.
3399	25SEP85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
3400	28SEP85	3450	21.9	11.4	440	0.6	0.5	.	130	.	3	.	.	.
3401	010CT85	.	.	.	.	.	.	.	.	.	.	6724.7	.	.
3402	020CT85	.	.	.	.	.	.	.	.	.	.	6726.6	.	.
3403	030CT85	3112	22.3	11.8	320	0.9	0.4	.	112	.	15	6727.2	.	.
3404	040CT85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
3405	050CT85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
3406	060CT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
3407	090CT85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
3408	120CT85	4488	22.0	12.1	772	1.2	0.4	.	140	.	15	.	.	.
3409	160CT85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
3410	180CT85	3510	22.2	11.9	424	0.7	0.6	.	.	.	22	.	.	.
3411	230CT85	3587	21.0	11.8	400	0.9	0.5	.	140	.	15	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-7A

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3412	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
3413	01NOV85	4417	22.2	12.0	700	0.8	0.4	.	185	.	25	6729.7	.	.
3414	03NOV85	.	.	.	.	.	.	.	.	.	.	6729.5	.	.
3415	08NOV85	3755	21.8	11.9	592	0.7	0.5	.	185	.	14	.	.	.
3416	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.8	.	.
3417	16NOV85	5222	22.0	12.2	976	1.2	0.4	.	205	.	18	.	.	.
3418	22NOV85	4561	21.8	12.0	596	0.7	0.5	.	170	.	2	6729.8	.	.
3419	27NOV85	.	.	.	.	.	.	.	.	.	.	6730.2	.	.
3420	29NOV85	4452	21.0	11.9	528	1.1	0.5	.	180	.	15	.	.	.
3421	04DEC85	4561	21.7	11.8	572	1.0	0.5	.	185	.	20	6729.2	.	.
3422	05DEC85	5758	21.7	11.6	.	1.6	.	.	215	.	.	.	.	.
3423	06DEC85	6252	21.8	11.8	.	1.1	.	.	245	.	.	.	.	.
3424	07DEC85	3514	20.0	11.6	.	1.5	.	.	173	.	.	.	.	.
3425	08DEC85	4568	20.0	11.9	.	1.6	.	.	200	.	.	.	.	.
3426	09DEC85	4167	21.4	11.9	.	1.6	.	.	198	.	.	.	.	.
3427	10DEC85	3715	21.4	11.7	.	1.6	.	.	182	.	.	.	.	.
3428	11DEC85	3758	22.1	12.0	588	1.0	0.5	.	200	.	20	.	.	.
3429	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.6	.	.
3430	17DEC85	3802	22.8	12.0	436	.	0.5	.	185	.	19	.	.	.
3431	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
3432	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
3433	26DEC85	3637	23.5	11.8	408	1.4	0.5	.	178	.	18	.	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-7B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3434	02JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
3435	03JAN85	5843	30.6	11.3	.	.	2.5	2	760	.	42	.	.	.
3436	07JAN85	6185	31.2	11.2	.	.	2.5	2	760	.	40	.	.	.
3437	09JAN85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
3438	14JAN85	6075	31.0	11.2	.	7.6	2.7	5	800	.	41	.	.	.
3439	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.
3440	21JAN85	5972	31.0	11.2	.	6.2	3.4	2	800	.	40	.	.	.
3441	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
3442	28JAN85	6718	.	11.8	.	6.8	2.7	-1	770	.	32	.	.	.
3443	30JAN85	.	.	.	.	.	.	.	.	.	.	6716.1	.	.
3444	04FEB85	6016	30.8	11.2	.	6.4	2.8	2	680	.	42	.	.	.
3445	06FEB85	.	.	.	.	.	.	.	.	.	.	6716.4	.	.
3446	11FEB85	6227	31.7	11.2	.	5.6	2.7	5	800	.	42	.	.	.
3447	13FEB85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
3448	18FEB85	6278	31.5	11.2	.	5.6	3.1	5	780	.	32	.	.	.
3449	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
3450	25FEB85	6145	29.0	11.6	.	5.8	2.4	2	740	.	35	.	.	.
3451	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
3452	04MAR85	6171	31.0	11.2	.	6.6	2.8	5	760	.	32	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-7B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3453	06MAR85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.
3454	11MAR85	5978	31.6	11.3	.	6.6	2.6	5	780	.	40	.	.	.
3455	14MAR85	.	.	.	.	.	.	.	.	.	.	6717.3	.	.
3456	18MAR85	6116	31.2	11.2	.	6.8	2.8	4	770	.	45	.	.	.
3457	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.6	.	.
3458	25MAR85	6384	31.0	11.6	.	6.4	2.9	4	840	.	30	.	.	.
3459	28MAR85	.	.	.	.	.	.	.	.	.	.	6720.2	.	.
3460	01APR85	6089	31.2	11.2	.	6.4	3.8	4	780	.	28	.	.	.
3461	08APR85	6075	30.7	11.1	.	6.6	2.8	2	800	.	40	.	.	.
3462	09APR85	.	.	.	.	.	.	.	.	.	.	6722.9	.	.
3463	15APR85	6149	31.0	11.2	.	7.2	2.8	2	760	.	45	.	.	.
3464	18APR85	.	.	.	.	.	.	.	.	.	.	6723.7	.	.
3465	23APR85	5994	30.6	11.1	176	6.8	2.7	3	770	.	38	.	.	.
3466	25APR85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
3467	29APR85	5863	30.6	11.2	148	6.2	2.8	4	740	.	35	.	.	.
3468	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.9	.	.
3469	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
3470	13MAY85	5723	31.2	11.4	180	7.0	2.2	5	740	-0.1	38	.	.	.
3471	15MAY85	.	.	.	.	.	.	.	.	.	.	6705.1	.	.
3472	16MAY85	.	.	.	.	.	.	.	.	.	.	6672.9	.	.
3473	17MAY85	.	.	.	.	.	.	.	.	.	.	6649.6	.	.
3474	18MAY85	.	.	.	.	.	.	.	.	.	.	6644.5	.	.
3475	19MAY85	.	.	.	.	.	.	.	.	.	.	6629.2	.	.
3476	20MAY85	5557	29.8	11.8	232	4.2	2.2	-1	660	.	35	6619.5	.	.
3477	21MAY85	.	.	.	.	.	.	.	.	.	.	6625.2	.	.
3478	22MAY85	.	.	.	.	.	.	.	.	.	.	6641.4	.	.
3479	23MAY85	3251	27.8	9.7	66	5.6	4.0	-1	360	-0.1	15	6647.3	.	.
3480	24MAY85	.	.	.	.	.	.	.	.	.	.	6608.2	.	.
3481	25MAY85	.	.	.	.	.	.	.	.	.	.	6596.6	.	.
3482	26MAY85	.	.	.	.	.	.	.	.	.	.	6586.9	.	.
3483	27MAY85	3129	24.3	10.0	52	4.5	2.4	-1	290	-0.1	32	6578.9	.	.
3484	28MAY85	.	.	.	.	.	.	.	.	.	.	6585.0	.	.
3485	29MAY85	3271	23.0	9.1	56	2.0	3.2	1	330	-0.1	25	6572.2	.	.
3486	30MAY85	5150	21.8	11.8	668	3.9	2.5	-1	490	-0.1	35	6560.4	.	.
3487	31MAY85	5444	20.1	12.0	744	3.8	2.5	-1	480	0.1	42	6551.9	.	.
3488	01JUN85	2618	.	9.2	84	0.7	3.5	-1	210	-0.1	15	6549.3	.	.
3489	02JUN85	2310	20.0	9.2	132	0.3	3.7	-1	125	-0.1	15	6648.5	.	.
3490	03JUN85	2075	20.2	9.4	66	0.8	4.3	-1	120	-0.1	18	6666.5	.	.
3491	04JUN85	2026	21.3	9.5	64	0.5	5.1	-1	115	-0.1	15	6682.2	.	.
3492	05JUN85	2058	22.0	9.7	52	0.7	4.8	-1	125	-0.1	15	6688.4	.	.
3493	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.1	.	.
3494	07JUN85	1778	21.3	9.0	48	0.4	.	-1	121	-0.1	22	6698.3	.	.
3495	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.6	.	.
3496	09JUN85	.	.	.	.	.	.	.	.	.	.	6704.1	.	.
3497	10JUN85	2168	21.8	9.2	46	0.2	3.4	-1	130	-0.1	15	6705.1	.	.
3498	11JUN85	1924	21.8	9.2	.	0.3	.	.	140	.	.	6707.0	.	.
3499	12JUN85	.	.	.	.	.	.	.	.	.	.	6708.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-7B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3500	13JUN85	1987	21.5	8.9	48	0.5	.	-1	120	-0.1	13	6709.5	.	.
3501	18JUN85	2226	22.2	9.0	.	0.4	4.1	-1	175	-0.1	12	.	.	.
3502	19JUN85	.	.	.	.	.	.	.	.	.	.	6714.2	.	.
3503	25JUN85	2346	22.0	9.5	.	0.2	4.2	-1	135	-0.1	10	.	.	.
3504	26JUN85	.	.	.	.	.	.	.	.	.	.	6717.1	.	.
3505	28JUN85	2374	22.6	9.0	.	0.7	.	-1	130	-0.1	6	.	.	.
3506	02JUL85	2450	23.0	9.5	36	0.3	.	.	102	.	2	.	.	.
3507	03JUL85	.	.	.	.	.	.	.	.	.	.	6719.0	.	.
3508	05JUL85	2359	24.0	9.1	60	0.3	.	.	121	.	7	.	.	.
3509	09JUL85	2397	22.6	8.9	32	0.4	2.2	-1	123	.	35	.	.	.
3510	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.8	.	.
3511	16JUL85	2522	22.7	9.3	36	0.3	2.3	-1	150	.	13	.	.	.
3512	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.8	.	.
3513	19JUL85	2415	23.3	9.0	48	0.7	2.3	-1	150	-0.1	18	.	.	.
3514	24JUL85	2684	23.0	9.3	40	0.5	2.3	-1	152	.	20	.	.	.
3515	25JUL85	.	.	.	.	.	.	.	.	.	.	6723.1	.	.
3516	27JUL85	2428	23.3	9.0	28	0.7	2.4	-1	145	-0.1	11	.	.	.
3517	30JUL85	2440	23.0	8.9	28	0.7	2.3	-1	140	-0.1	15	.	.	.
3518	31JUL85	.	.	.	.	.	.	.	.	.	.	6724.4	.	.
3519	02AUG85	2386	23.1	9.0	28	0.7	2.3	-1	152	.	-1	.	.	.
3520	06AUG85	2642	23.3	9.2	32	0.8	2.1	-1	105	.	9	.	.	.
3521	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.5	.	.
3522	10AUG85	2579	23.3	9.0	44	0.6	2.2	-1	158	.	5	.	.	.
3523	13AUG85	2638	23.3	9.3	28	0.6	2.0	-1	104	-0.1	18	.	.	.
3524	14AUG85	.	.	.	.	.	.	.	.	.	.	6726.4	.	.
3525	16AUG85	2624	23.3	9.2	40	0.7	2.1	-1	155	.	2	.	.	.
3526	20AUG85	2626	23.9	9.0	28	2.5	2.3	.	155	-0.1	12	.	.	.
3527	21AUG85	.	.	.	.	.	.	.	.	.	.	6724.0	.	.
3528	23AUG85	2557	23.5	9.3	40	0.8	2.4	-1	130	.	2	.	.	.
3529	28AUG85	2600	22.9	8.9	32	0.6	2.3	-1	100	.	10	6727.1	.	.
3530	04SEP85	2620	22.5	10.0	32	0.5	2.4	-1	156	-0.1	13	.	.	.
3531	05SEP85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
3532	12SEP85	2523	22.4	9.2	24	0.4	2.3	.	150	.	12	6728.0	.	.
3533	20SEP85	2760	23.0	9.0	24	0.4	2.3	.	155	.	15	6728.0	.	.
3534	25SEP85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
3535	28SEP85	2550	22.2	8.3	40	0.4	2.2	.	135	.	15	.	.	.
3536	010CT85	.	.	.	.	.	.	.	.	.	.	6725.8	.	.
3537	020CT85	.	.	.	.	.	.	.	.	.	.	6726.9	.	.
3538	030CT85	2650	22.4	9.0	28	0.7	2.3	.	135	.	12	6727.5	.	.
3539	040CT85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
3540	050CT85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
3541	060CT85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
3542	090CT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
3543	120CT85	2754	22.2	9.1	20	0.8	2.3	.	138	.	2	.	.	.
3544	160CT85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
3545	180CT85	2699	22.3	9.1	28	0.4	2.2	.	.	.	12	.	.	.
3546	230CT85	2691	21.5	9.5	40	0.7	2.3	.	175	.	12	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-7B

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3547	24OCT85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
3548	01NOV85	2808	22.4	8.8	20	0.6	2.2	.	195	.	30	6729.5	.	.
3549	03NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
3550	08NOV85	2788	22.0	9.0	28	0.4	2.2	.	190	.	8	.	.	.
3551	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.8	.	.
3552	16NOV85	2772	22.1	9.1	32	0.8	2.0	.	185	.	15	.	.	.
3553	22NOV85	2783	21.9	8.9	24	0.5	2.1	.	170	.	12	6729.9	.	.
3554	27NOV85	.	.	.	.	.	.	.	.	.	.	6730.1	.	.
3555	29NOV85	2851	21.0	8.2	24	0.6	2.2	.	180	.	5	.	.	.
3556	04DEC85	2985	21.9	9.2	24	0.7	2.3	.	105	.	20	6729.5	.	.
3557	11DEC85	2409	21.9	10.0	28	0.6	2.3	.	208	.	14	.	.	.
3558	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
3559	17DEC85	2765	22.8	9.6	24	.	2.5	.	200	.	13	.	.	.
3560	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
3561	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
3562	26DEC85	2762	22.5	9.4	24	0.9	2.3	.	193	.	17	.	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-7C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3563	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
3564	03JAN85	5945	30.3	10.6	.	.	2.5	1	700	.	40	.	.	.
3565	07JAN85	5975	30.8	10.4	.	.	2.5	1	700	.	38	.	.	.
3566	09JAN85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
3567	14JAN85	5300	30.7	10.4	.	7.4	2.7	-1	760	.	38	.	.	.
3568	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
3569	21JAN85	5385	30.5	10.5	.	6.0	3.3	-1	750	.	40	.	.	.
3570	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
3571	28JAN85	5711	.	10.3	.	5.6	3.1	-1	740	.	40	.	.	.
3572	30JAN85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.
3573	04FEB85	5478	30.7	10.4	.	5.9	2.7	-1	720	.	32	.	.	.
3574	06FEB85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
3575	11FEB85	5671	31.6	10.3	.	5.6	2.7	2	750	.	32	.	.	.
3576	13FEB85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.
3577	18FEB85	5746	30.8	10.4	.	5.4	3.0	-1	740	.	25	.	.	.
3578	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
3579	25FEB85	5606	30.5	10.3	.	5.6	2.5	-1	720	.	32	.	.	.
3580	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
3581	04MAR85	5620	31.0	10.3	.	6.5	2.9	-1	700	.	22	.	.	.
3582	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
3583	11MAR85	5424	31.1	10.6	.	6.6	2.4	5	740	.	28	.	.	.
3584	14MAR85	.	.	.	.	.	.	.	.	.	.	6717.1	.	.
3585	18MAR85	5687	30.5	10.5	.	6.4	2.7	1	720	.	35	.	.	.
3586	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.3	.	.
3587	25MAR85	5533	30.7	10.3	.	6.2	3.1	-1	780	.	35	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-7C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3588	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.9	.	.
3589	01APR85	5794	30.8	10.2	.	6.4	3.5	1	740	.	25	.	.	.
3590	08APR85	5800	30.7	10.1	.	6.6	3.0	-1	760	.	35	.	.	.
3591	09APR85	.	.	.	.	.	.	.	.	.	.	6721.7	.	.
3592	15APR85	5947	30.7	10.2	.	7.4	2.9	-1	710	.	38	.	.	.
3593	18APR85	.	.	.	.	.	.	.	.	.	.	6723.5	.	.
3594	23APR85	5627	30.1	10.0	74	6.8	2.8	-1	740	.	32	.	.	.
3595	25APR85	.	.	.	.	.	.	.	.	.	.	6724.9	.	.
3596	29APR85	5837	30.2	10.4	71	6.2	2.9	1	700	.	32	.	.	.
3597	01MAY85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
3598	06MAY85	6018	30.0	10.4	73	6.2	3.2	-1	720	.	45	.	.	.
3599	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.3	.	.
3600	13MAY85	5618	31.0	10.2	64	7.0	2.4	2	720	-0.1	42	.	.	.
3601	15MAY85	.	.	.	.	.	.	.	.	.	.	6704.8	.	.
3602	16MAY85	.	.	.	.	.	.	.	.	.	.	6672.7	.	.
3603	17MAY85	.	.	.	.	.	.	.	.	.	.	6649.6	.	.
3604	18MAY85	.	.	.	.	.	.	.	.	.	.	6644.5	.	.
3605	19MAY85	.	.	.	.	.	.	.	.	.	.	6629.0	.	.
3606	20MAY85	5454	30.3	9.7	50	4.2	2.3	-1	670	.	38	6619.6	.	.
3607	21MAY85	.	.	.	.	.	.	.	.	.	.	6625.0	.	.
3608	22MAY85	.	.	.	.	.	.	.	.	.	.	6640.9	.	.
3609	23MAY85	3759	28.1	9.6	44	5.4	2.1	-1	430	0.1	20	6646.8	.	.
3610	24MAY85	.	.	.	.	.	.	.	.	.	.	6607.7	.	.
3611	25MAY85	.	.	.	.	.	.	.	.	.	.	6596.3	.	.
3612	26MAY85	.	.	.	.	.	.	.	.	.	.	6586.2	.	.
3613	27MAY85	3025	24.0	9.0	64	3.8	4.2	-1	300	0.1	20	6578.5	.	.
3614	28MAY85	.	.	.	.	.	.	.	.	.	.	6584.4	.	.
3615	29MAY85	2827	23.0	8.7	74	1.2	4.4	-1	285	-0.1	22	6571.6	.	.
3616	30MAY85	3679	21.3	8.7	60	2.7	3.8	-1	480	0.1	30	6560.0	.	.
3617	31MAY85	3989	19.8	8.9	66	2.5	3.9	-1	460	0.1	32	6551.7	.	.
3618	01JUN85	2565	.	8.6	106	0.5	4.3	-1	210	-0.1	12	6548.6	.	.
3619	02JUN85	2207	20.0	8.6	112	0.2	5.2	-1	145	-0.1	20	6648.3	.	.
3620	03JUN85	2682	20.2	8.7	76	1.2	4.7	-1	220	-0.1	12	6666.0	.	.
3621	04JUN85	2066	20.9	8.8	78	0.4	4.8	-1	135	-0.1	15	6681.6	.	.
3622	05JUN85	1965	21.5	8.8	72	0.6	4.6	-1	135	-0.1	15	6687.9	.	.
3623	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.3	.	.
3624	07JUN85	1974	21.0	8.7	60	0.2	.	-1	89	-0.1	13	6698.4	.	.
3625	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.6	.	.
3626	09JUN85	.	.	.	.	.	.	.	.	.	.	6704.1	.	.
3627	10JUN85	2030	21.3	8.7	54	0.2	4.4	-1	110	-0.1	12	6705.0	.	.
3628	11JUN85	1801	21.3	8.7	.	0.2	.	.	105	.	.	6706.8	.	.
3629	12JUN85	.	.	.	.	.	.	.	.	.	.	6708.1	.	.
3630	13JUN85	1990	21.5	8.5	60	0.3	.	-1	102	-0.1	13	6709.6	.	.
3631	18JUN85	2024	22.1	8.5	.	0.4	5.7	-1	92	-0.1	10	.	.	.
3632	19JUN85	.	.	.	.	.	.	.	.	.	.	6714.0	.	.
3633	20JUN85	2282	22.2	8.9	.	0.4	5.6	-1	101	-0.1	11	.	.	.
3634	25JUN85	2244	21.6	8.8	.	0.2	4.8	-1	115	-0.1	15	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-7C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3635	26JUN85	.	.	.	.	.	.	.	.	.	.	6717.1	.	.
3636	28JUN85	2268	22.5	8.7	.	0.4	.	-1	107	-0.1	9	.	.	.
3637	02JUL85	2306	22.6	9.0	36	0.2	.	.	100	.	17	.	.	.
3638	03JUL85	.	.	.	.	.	.	.	.	.	.	6719.1	.	.
3639	05JUL85	2182	23.0	8.8	36	0.2	.	.	101	.	3	.	.	.
3640	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.9	.	.
3641	13JUL85	2312	22.8	8.6	48	0.9	2.8	.	51	-0.1	10	.	.	.
3642	16JUL85	2409	22.7	8.9	40	0.2	2.5	-1	127	-0.1	13	.	.	.
3643	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.8	.	.
3644	19JUL85	2415	22.9	8.8	40	0.6	2.5	-1	130	-0.1	21	.	.	.
3645	24JUL85	2479	22.9	8.9	40	0.4	2.6	-1	122	-0.1	15	.	.	.
3646	25JUL85	.	.	.	.	.	.	.	.	.	.	6723.2	.	.
3647	27JUL85	2428	23.0	8.9	36	0.7	2.6	-1	118	-0.1	15	.	.	.
3648	30JUL85	2390	22.8	8.8	28	0.6	2.3	-1	125	-0.1	15	.	.	.
3649	31JUL85	.	.	.	.	.	.	.	.	.	.	6724.4	.	.
3650	02AUG85	2398	22.8	8.8	32	0.8	2.5	-1	128	-0.1	-1	.	.	.
3651	06AUG85	2540	23.2	8.9	28	0.8	2.3	2	104	-0.1	-1	.	.	.
3652	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
3653	10AUG85	2480	23.0	8.8	28	0.6	2.5	-1	135	-0.1	5	.	.	.
3654	13AUG85	2527	23.0	8.9	60	0.5	2.2	-1	102	-0.1	8	.	.	.
3655	14AUG85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
3656	16AUG85	2476	23.1	9.0	.	0.6	2.4	-1	135	-0.1	-1	.	.	.
3657	20AUG85	2525	23.6	8.8	32	0.4	2.5	.	130	-0.1	10	.	.	.
3658	21AUG85	.	.	.	.	.	.	.	.	.	.	6724.1	.	.
3659	23AUG85	2368	23.0	8.9	28	0.8	2.5	-1	95	-0.1	2	.	.	.
3660	28AUG85	2505	22.3	8.6	36	0.6	2.4	-1	94	-0.1	3	6727.1	.	.
3661	04SEP85	2597	22.5	9.1	24	0.4	2.7	-1	135	-0.1	13	.	.	.
3662	05SEP85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
3663	12SEP85	2409	22.0	8.7	32	0.3	2.4	.	130	.	8	6728.1	.	.
3664	20SEP85	2630	22.5	8.3	20	0.3	2.4	.	140	.	15	6728.0	.	.
3665	25SEP85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
3666	28SEP85	2360	21.9	8.1	32	0.3	2.5	.	130	.	12	.	.	.
3667	010CT85	.	.	.	.	.	.	.	.	.	.	6725.9	.	.
3668	020CT85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
3669	030CT85	2480	22.1	8.9	40	0.6	2.6	.	125	.	-1	6727.6	.	.
3670	040CT85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
3671	050CT85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
3672	060CT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
3673	090CT85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
3674	120CT85	2570	22.0	8.8	32	0.7	2.6	.	120	.	5	.	.	.
3675	160CT85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
3676	180CT85	2480	22.2	8.7	40	0.3	2.7	.	.	.	12	.	.	.
3677	230CT85	2599	22.2	9.2	40	0.6	2.6	.	160	.	12	.	.	.
3678	240CT85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
3679	01NOV85	2659	22.2	8.7	24	0.5	2.5	.	175	.	-1	6729.6	.	.
3680	03NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
3681	08NOV85	2726	22.0	8.0	12	0.4	2.5	.	185	.	5	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-7C

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3682	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.8	.	.
3683	16NOV85	2570	22.0	8.9	32	0.7	2.2	.	170	.	20	.	.	.
3684	22NOV85	2580	21.6	8.8	28	0.4	2.4	.	155	.	8	6730.0	.	.
3685	27NOV85	.	.	.	.	.	.	.	.	.	.	6730.2	.	.
3686	29NOV85	2600	21.5	8.5	32	0.4	2.5	.	155	.	10	.	.	.
3687	04DEC85	2934	21.8	9.1	24	0.6	2.3	.	195	.	20	6729.6	.	.
3688	11DEC85	2340	21.7	9.6	24	0.6	2.4	.	202	.	22	.	.	.
3689	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
3690	17DEC85	2592	22.5	9.5	20	.	2.6	.	195	.	16	.	.	.
3691	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
3692	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
3693	26DEC85	2752	22.5	9.2	20	0.8	2.4	.	189	.	22	.	.	.

STATION TYPE=RTAB STATION LOCATION=RAM-7G

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3694	02JAN85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
3695	03JAN85	5515	30.4	9.4	.	.	3.8	-1	720	0.6	85	.	.	.
3696	07JAN85	5580	30.6	9.4	.	.	3.9	5	720	0.6	102	.	.	.
3697	09JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
3698	14JAN85	5200	30.7	9.4	.	9.8	4.1	-1	760	.	118	.	.	.
3699	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
3700	21JAN85	5287	30.4	9.3	.	8.0	5.0	-1	760	0.6	122	.	.	.
3701	23JAN85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.
3702	28JAN85	5533	.	9.4	.	6.8	4.3	-1	760	0.3	78	.	.	.
3703	30JAN85	.	.	.	.	.	.	.	.	.	.	6716.4	.	.
3704	04FEB85	5378	30.5	9.2	.	8.4	4.2	5	740	0.6	115	.	.	.
3705	06FEB85	.	.	.	.	.	.	.	.	.	.	6716.5	.	.
3706	11FEB85	5560	31.4	9.2	.	7.6	3.9	5	750	0.8	120	.	.	.
3707	13FEB85	.	.	.	.	.	.	.	.	.	.	6716.5	.	.
3708	18FEB85	5320	31.0	9.3	.	7.8	4.4	1	720	0.6	92	.	.	.
3709	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
3710	25FEB85	5067	30.5	9.4	.	7.8	3.5	-1	720	0.4	165	.	.	.
3711	27FEB85	.	.	.	.	.	.	.	.	.	.	6716.1	.	.
3712	04MAR85	5179	31.0	9.4	.	8.4	3.8	5	700	0.8	105	.	.	.
3713	06MAR85	.	.	.	.	.	.	.	.	.	.	6716.2	.	.
3714	11MAR85	5314	30.8	9.4	.	8.9	3.1	5	740	0.4	105	.	.	.
3715	14MAR85	.	.	.	.	.	.	.	.	.	.	6717.6	.	.
3716	18MAR85	5580	30.8	9.2	.	9.4	4.3	5	720	0.4	130	.	.	.
3717	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.8	.	.
3718	25MAR85	5320	30.2	9.4	.	8.6	4.2	5	760	0.4	85	.	.	.
3719	28MAR85	.	.	.	.	.	.	.	.	.	.	6720.4	.	.
3720	01APR85	5365	30.7	9.3	.	8.4	4.9	2	750	0.4	72	.	.	.
3721	08APR85	5500	30.3	9.2	.	8.6	4.0	-1	790	0.3	80	.	.	.
3722	09APR85	.	.	.	.	.	.	.	.	.	.	6722.1	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-7G

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3723	15APR85	5645	30.5	9.3	.	9.8	4.2	-1	700	0.3	90	.	.	.
3724	18APR85	.	.	.	.	.	.	.	.	.	.	6723.9	.	.
3725	23APR85	5271	29.6	9.1	64	8.6	3.8	-1	740	0.3	78	.	.	.
3726	25APR85	.	.	.	.	.	.	.	.	.	.	6725.3	.	.
3727	29APR85	5340	30.5	9.3	38	7.4	4.2	1	690	0.3	82	.	.	.
3728	01MAY85	.	.	.	.	.	.	.	.	.	.	6726.1	.	.
3729	06MAY85	5712	29.4	9.3	54	8.6	4.4	-1	720	0.4	130	.	.	.
3730	08MAY85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
3731	13MAY85	5250	30.1	9.1	46	8.3	3.4	-1	720	1.0	90	.	.	.
3732	15MAY85	.	.	.	.	.	.	.	.	.	.	6704.5	.	.
3733	16MAY85	.	.	.	.	.	.	.	.	.	.	6672.3	.	.
3734	17MAY85	.	.	.	.	.	.	.	.	.	.	6649.1	.	.
3735	18MAY85	.	.	.	.	.	.	.	.	.	.	6644.4	.	.
3736	19MAY85	.	.	.	.	.	.	.	.	.	.	6628.5	.	.
3737	20MAY85	5155	30.8	9.4	42	8.0	3.5	-1	720	0.3	75	6619.3	.	.
3738	21MAY85	.	.	.	.	.	.	.	.	.	.	6624.5	.	.
3739	22MAY85	.	.	.	.	.	.	.	.	.	.	6640.5	.	.
3740	23MAY85	4674	29.1	9.8	60	9.6	3.9	5	610	.	50	6646.3	.	.
3741	24MAY85	.	.	.	.	.	.	.	.	.	.	6605.9	.	.
3742	25MAY85	.	.	.	.	.	.	.	.	.	.	6594.2	.	.
3743	26MAY85	.	.	.	.	.	.	.	.	.	.	6584.2	.	.
3744	27MAY85	3181	25.5	9.5	42	4.4	4.6	-1	330	0.1	32	6576.1	.	.
3745	28MAY85	.	.	.	.	.	.	.	.	.	.	6582.4	.	.
3746	29MAY85	3772	24.5	9.1	36	2.7	4.6	-1	430	0.1	45	6569.0	.	.
3747	30MAY85	3994	22.0	8.5	44	4.1	4.6	-1	540	0.2	52	6557.4	.	.
3748	31MAY85	4096	20.8	8.8	48	4.3	4.6	-1	550	0.2	60	6547.9	.	.
3749	01JUN85	2827	.	8.8	42	0.7	4.8	-1	260	-0.1	22	6546.2	.	.
3750	02JUN85	2417	20.0	8.8	46	0.3	5.3	-1	192	-0.1	20	6647.9	.	.
3751	03JUN85	3643	20.9	8.6	40	2.5	5.2	-1	400	-0.1	35	6665.8	.	.
3752	04JUN85	2419	21.9	8.8	34	0.7	5.8	-1	200	-0.1	35	6681.4	.	.
3753	05JUN85	3010	22.5	8.9	38	1.5	5.5	-1	285	-0.1	25	6687.6	.	.
3754	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.0	.	.
3755	07JUN85	3065	22.0	9.0	64	1.1	.	-1	282	-0.1	32	6698.3	.	.
3756	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.7	.	.
3757	09JUN85	.	.	.	.	.	.	.	.	.	.	6704.1	.	.
3758	10JUN85	2662	23.0	9.1	40	0.6	5.6	-1	240	-0.1	38	6705.0	.	.
3759	11JUN85	2315	22.5	9.1	.	0.4	.	.	200	.	.	6707.0	.	.
3760	12JUN85	.	.	.	.	.	.	.	.	.	.	6708.3	.	.
3761	13JUN85	2210	22.4	8.9	48	0.6	.	-1	165	-0.1	28	6709.5	.	.
3762	18JUN85	1822	22.4	8.6	.	0.7	7.0	-1	145	-0.1	20	.	.	.
3763	19JUN85	.	.	.	.	.	.	.	.	.	.	6714.3	.	.
3764	20JUN85	2272	23.0	9.0	.	0.4	8.5	-1	103	-0.1	32	.	.	.
3765	25JUN85	2361	21.8	8.7	.	0.3	6.6	-1	145	-0.1	25	.	.	.
3766	26JUN85	.	.	.	.	.	.	.	.	.	.	6717.1	.	.
3767	28JUN85	2277	22.8	8.7	.	0.7	.	-1	138	-0.1	12	.	.	.
3768	02JUL85	2368	22.8	8.8	24	0.4	.	.	103	.	46	.	.	.
3769	03JUL85	.	.	.	.	.	.	.	.	.	.	6719.1	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-7G

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3770	05JUL85	2279	23.0	8.6	32	0.4	.	.	103	.	19	.	.	.
3771	09JUL85	2225	22.8	8.5	24	0.4	3.5	-1	132	.	18	.	.	.
3772	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.9	.	.
3773	16JUL85	2482	23.0	8.8	28	0.4	3.5	-1	150	-0.1	36	.	.	.
3774	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.8	.	.
3775	19JUL85	2415	23.5	8.7	28	0.9	3.6	-1	145	-0.1	42	.	.	.
3776	24JUL85	2606	23.0	8.9	36	0.7	3.7	-1	148	.	37	.	.	.
3777	25JUL85	.	.	.	.	.	.	.	.	.	.	6723.3	.	.
3778	27JUL85	2660	23.0	9.0	28	0.9	3.6	-1	142	-0.1	35	.	.	.
3779	30JUL85	2490	22.9	8.9	28	0.9	3.6	2	148	-0.1	38	.	.	.
3780	31JUL85	.	.	.	.	.	.	.	.	.	.	6724.4	.	.
3781	02AUG85	2530	23.0	8.8	28	0.9	3.7	-1	155	-0.1	18	.	.	.
3782	06AUG85	1616	23.1	8.7	32	0.9	3.4	-1	105	.	22	.	.	.
3783	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
3784	10AUG85	2833	23.0	8.9	44	0.6	3.7	-1	162	.	22	.	.	.
3785	13AUG85	2633	23.2	8.7	40	0.7	3.4	3	104	.	-1	.	.	.
3786	14AUG85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
3787	16AUG85	2524	23.5	8.9	28	0.9	3.5	2	152	-0.1	20	.	.	.
3788	20AUG85	2706	23.8	8.9	36	0.6	3.5	.	155	-0.1	35	.	.	.
3789	21AUG85	.	.	.	.	.	.	.	.	.	.	6724.1	.	.
3790	23AUG85	2620	23.8	8.7	52	1.8	3.5	2	115	-0.1	50	.	.	.
3791	28AUG85	2574	23.3	8.6	36	1.1	3.5	-1	115	-0.1	42	6727.2	.	.
3792	04SEP85	2588	23.0	8.9	32	0.8	3.9	-1	150	.	47	.	.	.
3793	05SEP85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
3794	12SEP85	2426	22.9	8.5	20	0.9	3.2	.	145	.	32	6728.1	.	.
3795	20SEP85	2520	23.0	8.2	20	0.7	3.3	.	170	.	48	6728.1	.	.
3796	25SEP85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
3797	28SEP85	1640	22.4	8.1	24	0.9	3.3	.	145	.	42	.	.	.
3798	01OCT85	.	.	.	.	.	.	.	.	.	.	6726.0	.	.
3799	02OCT85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
3800	03OCT85	2530	23.1	8.9	28	1.2	3.5	.	155	.	40	6727.6	.	.
3801	04OCT85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
3802	05OCT85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
3803	06OCT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
3804	09OCT85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
3805	12OCT85	2580	22.9	8.7	24	1.4	3.6	.	145	.	50	.	.	.
3806	16OCT85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
3807	18OCT85	2600	22.9	8.7	24	0.8	3.5	.	.	.	45	.	.	.
3808	23OCT85	2617	22.6	8.9	24	1.1	3.6	.	190	.	38	.	.	.
3809	24OCT85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
3810	01NOV85	2628	22.9	8.6	40	0.9	3.6	.	200	.	48	6729.6	.	.
3811	03NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
3812	08NOV85	2582	22.0	8.2	24	0.9	3.5	.	200	.	35	.	.	.
3813	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.9	.	.
3814	16NOV85	2520	22.5	8.5	24	1.2	3.2	.	185	.	45	.	.	.
3815	22NOV85	2609	21.9	8.5	24	1.0	3.3	.	175	.	35	6730.0	.	.
3816	27NOV85	.	.	.	.	.	.	.	.	.	.	6730.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RAM-7G

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3817	29NOV85	2707	21.5	8.6	28	1.0	3.4	.	190	.	40	.	.	.
3818	04DEC85	2716	21.8	8.2	32	1.0	3.3	.	195	.	55	6729.8	.	.
3819	11DEC85	2153	22.0	9.1	36	0.9	3.5	.	207	.	58	.	.	.
3820	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.6	.	.
3821	17DEC85	2650	22.5	8.9	28	.	3.7	.	200	.	45	.	.	.
3822	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
3823	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
3824	26DEC85	2575	23.0	8.3	24	1.2	3.6	.	197	.	42	.	.	.

STATION TYPE=RTAB STATION LOCATION=RET-0

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3825	04NOV85	1752	.	8.2	580	0.3	1.6	.	36	.	.	.	.	.
3826	04DEC85	1786	19.6	8.3	324	4.4	1.8	.	42	.	25	.	.	.

STATION TYPE=RTAB STATION LOCATION=RET-1-4-2

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3827	04DEC85	2068	22.8	8.2	140	0.8	0.9	.	76	.	25	6729.0	.	.
3828	12DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
3829	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
3830	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.

STATION TYPE=RTAB STATION LOCATION=RET-1-4-4

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3831	15MAY85	.	.	.	.	.	.	.	.	.	.	6704.7	.	.
3832	16MAY85	.	.	.	.	.	.	.	.	.	.	6673.1	.	.
3833	17MAY85	.	.	.	.	.	.	.	.	.	.	6649.9	.	.
3834	18MAY85	.	.	.	.	.	.	.	.	.	.	6644.9	.	.
3835	19MAY85	.	.	.	.	.	.	.	.	.	.	6629.3	.	.
3836	20MAY85	.	.	.	.	.	.	.	.	.	.	6620.6	.	.
3837	21MAY85	.	.	.	.	.	.	.	.	.	.	6626.0	.	.
3838	22MAY85	.	.	.	.	.	.	.	.	.	.	6641.8	.	.
3839	23MAY85	.	.	.	.	.	.	.	.	.	.	6647.6	.	.
3840	24MAY85	.	.	.	.	.	.	.	.	.	.	6608.5	.	.
3841	25MAY85	.	.	.	.	.	.	.	.	.	.	6597.1	.	.
3842	26MAY85	.	.	.	.	.	.	.	.	.	.	6587.3	.	.
3843	27MAY85	.	.	.	.	.	.	.	.	.	.	6578.7	.	.
3844	28MAY85	.	.	.	.	.	.	.	.	.	.	6585.2	.	.
3845	29MAY85	.	.	.	.	.	.	.	.	.	.	6572.5	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RET-1-4-4

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3846	31MAY85	.	.	.	.	.	.	.	.	.	.	6552.4	.	.
3847	01JUN85	.	.	.	.	.	.	.	.	.	.	6549.7	.	.
3848	02JUN85	1981	.	7.4	472	0.1	1.3	-1	17.0	-0.1	18	6648.8	.	.
3849	03JUN85	1923	24.0	7.3	464	0.4	1.3	-1	17.5	-0.1	15	6667.0	.	.
3850	04JUN85	1915	24.3	7.4	442	0.3	1.4	-1	20.0	-0.1	12	6682.6	.	.
3851	05JUN85	1852	24.0	7.4	458	0.4	1.3	-1	16.0	0.1	15	6688.8	.	.
3852	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.2	.	.
3853	07JUN85	1956	23.9	7.4	448	0.3	.	-1	20.0	-0.1	21	6698.4	.	.
3854	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.7	.	.
3855	09JUN85	.	.	.	.	.	.	.	.	.	.	6704.2	.	.
3856	10JUN85	1938	23.3	7.4	388	0.2	1.6	-1	27.0	0.1	15	6705.1	.	.
3857	11JUN85	1564	24.5	7.3	.	0.2	.	.	15.0	.	.	6707.1	.	.
3858	12JUN85	.	.	.	.	.	.	.	.	.	.	6708.4	.	.
3859	13JUN85	.	.	.	.	.	.	.	.	.	.	6706.6	.	.
3860	18JUN85	1933	23.8	7.5	.	0.3	1.4	-1	26.0	0.1	15	.	.	.
3861	19JUN85	.	.	.	.	.	.	.	.	.	.	6714.0	.	.
3862	26JUN85	.	.	.	.	.	.	.	.	.	.	6717.1	.	.
3863	03JUL85	.	.	.	.	.	.	.	.	.	.	6719.1	.	.
3864	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.8	.	.
3865	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.7	.	.
3866	25JUL85	.	.	.	.	.	.	.	.	.	.	6723.1	.	.
3867	31JUL85	.	.	.	.	.	.	.	.	.	.	6724.5	.	.
3868	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
3869	14AUG85	.	.	.	.	.	.	.	.	.	.	6726.4	.	.
3870	21AUG85	.	.	.	.	.	.	.	.	.	.	6724.1	.	.
3871	28AUG85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
3872	05SEP85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
3873	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.

STATION TYPE=RTAB STATION LOCATION=RET-2

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3874	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.1	.	.
3875	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.3	.	.
3876	16JAN85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.
3877	23JAN85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
3878	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
3879	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
3880	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
3881	21FEB85	.	.	.	.	.	.	.	.	.	.	6714.8	.	.
3882	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
3883	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
3884	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.5	.	.
3885	20MAR85	.	.	.	.	.	.	.	.	.	.	6717.6	.	.
3886	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.1	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RET-2

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3887	09APR85	.	.	.	.	.	.	.	.	.	.	6720.8	.	.
3888	18APR85	.	.	.	.	.	.	.	.	.	.	6722.6	.	.
3889	25APR85	.	.	.	.	.	.	.	.	.	.	6723.9	.	.
3890	15MAY85	.	.	.	.	.	.	.	.	.	.	6707.0	.	.
3891	16MAY85	.	.	.	.	.	.	.	.	.	.	6682.5	.	.
3892	21MAY85	.	.	.	.	.	.	.	.	.	.	6636.5	.	.
3893	22MAY85	.	.	.	.	.	.	.	.	.	.	6648.9	.	.
3894	23MAY85	.	.	.	.	.	.	.	.	.	.	6653.6	.	.
3895	24MAY85	.	.	.	.	.	.	.	.	.	.	6629.1	.	.
3896	25MAY85	.	.	.	.	.	.	.	.	.	.	6620.7	.	.
3897	26MAY85	.	.	.	.	.	.	.	.	.	.	6613.4	.	.
3898	27MAY85	.	.	.	.	.	.	.	.	.	.	6606.7	.	.
3899	28MAY85	.	.	.	.	.	.	.	.	.	.	6609.3	.	.
3900	29MAY85	.	.	.	.	.	.	.	.	.	.	6602.5	.	.
3901	30MAY85	.	.	.	.	.	.	.	.	.	.	6596.1	.	.
3902	31MAY85	.	.	.	.	.	.	.	.	.	.	6554.1	.	.
3903	01JUN85	.	.	.	.	.	.	.	.	.	.	6627.4	.	.
3904	02JUN85	.	.	.	.	.	.	.	.	.	.	6648.1	.	.
3905	03JUN85	.	.	.	.	.	.	.	.	.	.	6665.1	.	.
3906	04JUN85	.	.	.	.	.	.	.	.	.	.	6680.2	.	.
3907	05JUN85	.	.	.	.	.	.	.	.	.	.	6686.6	.	.
3908	06JUN85	.	.	.	.	.	.	.	.	.	.	6691.0	.	.
3909	07JUN85	.	.	.	.	.	.	.	.	.	.	6695.6	.	.
3910	08JUN85	.	.	.	.	.	.	.	.	.	.	6698.8	.	.
3911	09JUN85	.	.	.	.	.	.	.	.	.	.	6701.3	.	.
3912	10JUN85	.	.	.	.	.	.	.	.	.	.	6702.7	.	.
3913	11JUN85	.	.	.	.	.	.	.	.	.	.	6704.4	.	.
3914	12JUN85	.	.	.	.	.	.	.	.	.	.	6705.7	.	.
3915	13JUN85	.	.	.	.	.	.	.	.	.	.	6706.9	.	.
3916	19JUN85	.	.	.	.	.	.	.	.	.	.	6711.2	.	.
3917	26JUN85	.	.	.	.	.	.	.	.	.	.	6714.3	.	.
3918	03JUL85	.	.	.	.	.	.	.	.	.	.	6716.2	.	.
3919	11JUL85	.	.	.	.	.	.	.	.	.	.	6718.1	.	.
3920	17JUL85	.	.	.	.	.	.	.	.	.	.	6718.9	.	.
3921	25JUL85	.	.	.	.	.	.	.	.	.	.	6720.1	.	.
3922	31JUL85	.	.	.	.	.	.	.	.	.	.	6721.3	.	.
3923	07AUG85	.	.	.	.	.	.	.	.	.	.	6722.5	.	.
3924	14AUG85	.	.	.	.	.	.	.	.	.	.	6723.3	.	.
3925	21AUG85	.	.	.	.	.	.	.	.	.	.	6721.0	.	.
3926	28AUG85	.	.	.	.	.	.	.	.	.	.	6724.1	.	.
3927	04SEP85	.	.	.	.	.	.	.	.	.	.	6724.5	.	.
3928	12SEP85	.	.	.	.	.	.	.	.	.	.	6724.9	.	.
3929	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
3930	25SEP85	.	.	.	.	.	.	.	.	.	.	6726.7	.	.
3931	090CT85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
3932	160CT85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
3933	240CT85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RET-2

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3934	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
3935	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
3936	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
3937	22NOV85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
3938	27NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
3939	04DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
3940	12DEC85	.	.	.	.	.	.	.	.	.	.	6731.4	.	.
3941	19DEC85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
3942	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.

STATION TYPE=RTAB STATION LOCATION=RETORT

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3943	01JAN85	.	.	.	.	.	.	.	.	.	.	6713.2	.	.
3944	02JAN85	.	.	.	.	.	.	.	.	.	.	6713.2	.	.
3945	03JAN85	.	.	.	.	.	.	.	.	.	.	6713.2	.	.
3946	04JAN85	.	.	.	.	.	.	.	.	.	.	6713.3	.	.
3947	05JAN85	.	.	.	.	.	.	.	.	.	.	6713.3	.	.
3948	06JAN85	.	.	.	.	.	.	.	.	.	.	6713.4	.	.
3949	07JAN85	.	.	.	.	.	.	.	.	.	.	6713.5	.	.
3950	08JAN85	.	.	.	.	.	.	.	.	.	.	6713.5	.	.
3951	09JAN85	.	.	.	.	.	.	.	.	.	.	6713.5	.	.
3952	10JAN85	.	.	.	.	.	.	.	.	.	.	6713.4	.	.
3953	11JAN85	.	.	.	.	.	.	.	.	.	.	6713.4	.	.
3954	12JAN85	.	.	.	.	.	.	.	.	.	.	6713.4	.	.
3955	13JAN85	.	.	.	.	.	.	.	.	.	.	6713.3	.	.
3956	14JAN85	.	.	.	.	.	.	.	.	.	.	6713.6	.	.
3957	15JAN85	.	.	.	.	.	.	.	.	.	.	6713.7	.	.
3958	16JAN85	.	.	.	.	.	.	.	.	.	.	6713.6	.	.
3959	17JAN85	.	.	.	.	.	.	.	.	.	.	6713.6	.	.
3960	18JAN85	.	.	.	.	.	.	.	.	.	.	6713.7	.	.
3961	19JAN85	.	.	.	.	.	.	.	.	.	.	6713.7	.	.
3962	20JAN85	.	.	.	.	.	.	.	.	.	.	6713.7	.	.
3963	21JAN85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
3964	22JAN85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
3965	23JAN85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
3966	24JAN85	.	.	.	.	.	.	.	.	.	.	6714.0	.	.
3967	25JAN85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
3968	26JAN85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
3969	27JAN85	.	.	.	.	.	.	.	.	.	.	6714.1	.	.
3970	28JAN85	.	.	.	.	.	.	.	.	.	.	6714.2	.	.
3971	29JAN85	.	.	.	.	.	.	.	.	.	.	6714.2	.	.
3972	30JAN85	.	.	.	.	.	.	.	.	.	.	6714.3	.	.
3973	31JAN85	.	.	.	.	.	.	.	.	.	.	6714.3	.	.
3974	01FEB85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RETORT

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
3975	02FEB85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
3976	03FEB85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
3977	04FEB85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
3978	05FEB85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
3979	06FEB85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
3980	07FEB85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.
3981	08FEB85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.
3982	09FEB85	.	.	.	.	.	.	.	.	.	.	6714.5	.	.
3983	10FEB85	.	.	.	.	.	.	.	.	.	.	6714.3	.	.
3984	11FEB85	.	.	.	.	.	.	.	.	.	.	6714.3	.	.
3985	12FEB85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.
3986	13FEB85	.	.	.	.	.	.	.	.	.	.	6714.3	.	.
3987	14FEB85	.	.	.	.	.	.	.	.	.	.	6713.7	.	.
3988	15FEB85	.	.	.	.	.	.	.	.	.	.	6713.7	.	.
3989	16FEB85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
3990	17FEB85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
3991	18FEB85	.	.	.	.	.	.	.	.	.	.	6713.7	.	.
3992	19FEB85	.	.	.	.	.	.	.	.	.	.	6713.6	.	.
3993	20FEB85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
3994	21FEB85	.	.	.	.	.	.	.	.	.	.	6713.7	.	.
3995	22FEB85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
3996	23FEB85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
3997	24FEB85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
3998	25FEB85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
3999	26FEB85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
4000	27FEB85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
4001	28FEB85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
4002	01MAR85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
4003	02MAR85	.	.	.	.	.	.	.	.	.	.	6714.0	.	.
4004	03MAR85	.	.	.	.	.	.	.	.	.	.	6714.3	.	.
4005	04MAR85	.	.	.	.	.	.	.	.	.	.	6713.0	.	.
4006	05MAR85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
4007	06MAR85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
4008	07MAR85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
4009	08MAR85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.
4010	09MAR85	.	.	.	.	.	.	.	.	.	.	6714.6	.	.
4011	10MAR85	.	.	.	.	.	.	.	.	.	.	6714.8	.	.
4012	11MAR85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
4013	12MAR85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
4014	13MAR85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
4015	14MAR85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
4016	15MAR85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
4017	16MAR85	.	.	.	.	.	.	.	.	.	.	6715.7	.	.
4018	17MAR85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
4019	18MAR85	.	.	.	.	.	.	.	.	.	.	6716.1	.	.
4020	19MAR85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
4021	20MAR85	.	.	.	.	.	.	.	.	.	.	6716.4	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RETORT

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4022	21MAR85	.	.	.	.	.	.	.	.	.	.	6716.6	.	.
4023	22MAR85	.	.	.	.	.	.	.	.	.	.	6716.9	.	.
4024	23MAR85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
4025	24MAR85	.	.	.	.	.	.	.	.	.	.	6717.3	.	.
4026	25MAR85	.	.	.	.	.	.	.	.	.	.	6717.5	.	.
4027	26MAR85	.	.	.	.	.	.	.	.	.	.	6717.7	.	.
4028	27MAR85	.	.	.	.	.	.	.	.	.	.	6718.1	.	.
4029	28MAR85	.	.	.	.	.	.	.	.	.	.	6718.1	.	.
4030	29MAR85	.	.	.	.	.	.	.	.	.	.	6718.3	.	.
4031	30MAR85	.	.	.	.	.	.	.	.	.	.	6718.2	.	.
4032	31MAR85	.	.	.	.	.	.	.	.	.	.	6718.3	.	.
4033	01APR85	.	.	.	.	.	.	.	.	.	.	6718.3	.	.
4034	02APR85	.	.	.	.	.	.	.	.	.	.	6718.5	.	.
4035	03APR85	.	.	.	.	.	.	.	.	.	.	6718.8	.	.
4036	04APR85	.	.	.	.	.	.	.	.	.	.	6719.0	.	.
4037	05APR85	.	.	.	.	.	.	.	.	.	.	6719.2	.	.
4038	06APR85	.	.	.	.	.	.	.	.	.	.	6719.3	.	.
4039	07APR85	.	.	.	.	.	.	.	.	.	.	6719.5	.	.
4040	08APR85	.	.	.	.	.	.	.	.	.	.	6719.7	.	.
4041	09APR85	.	.	.	.	.	.	.	.	.	.	6719.9	.	.
4042	10APR85	.	.	.	.	.	.	.	.	.	.	6720.3	.	.
4043	11APR85	.	.	.	.	.	.	.	.	.	.	6720.5	.	.
4044	12APR85	.	.	.	.	.	.	.	.	.	.	6720.6	.	.
4045	13APR85	.	.	.	.	.	.	.	.	.	.	6720.8	.	.
4046	14APR85	.	.	.	.	.	.	.	.	.	.	6721.0	.	.
4047	15APR85	.	.	.	.	.	.	.	.	.	.	6721.2	.	.
4048	16APR85	.	.	.	.	.	.	.	.	.	.	6721.4	.	.
4049	17APR85	.	.	.	.	.	.	.	.	.	.	6721.5	.	.
4050	18APR85	.	.	.	.	.	.	.	.	.	.	6721.7	.	.
4051	19APR85	.	.	.	.	.	.	.	.	.	.	6722.0	.	.
4052	20APR85	.	.	.	.	.	.	.	.	.	.	6722.2	.	.
4053	21APR85	.	.	.	.	.	.	.	.	.	.	6722.3	.	.
4054	22APR85	.	.	.	.	.	.	.	.	.	.	6722.6	.	.
4055	23APR85	.	.	.	.	.	.	.	.	.	.	6722.5	.	.
4056	24APR85	.	.	.	.	.	.	.	.	.	.	6722.7	.	.
4057	25APR85	.	.	.	.	.	.	.	.	.	.	6723.1	.	.
4058	26APR85	.	.	.	.	.	.	.	.	.	.	6723.2	.	.
4059	27APR85	.	.	.	.	.	.	.	.	.	.	6723.3	.	.
4060	28APR85	.	.	.	.	.	.	.	.	.	.	6723.5	.	.
4061	29APR85	.	.	.	.	.	.	.	.	.	.	6723.7	.	.
4062	30APR85	.	.	.	.	.	.	.	.	.	.	6723.8	.	.
4063	02MAY85	.	.	.	.	.	.	.	.	.	.	6723.8	.	.
4064	03MAY85	.	.	.	.	.	.	.	.	.	.	6724.0	.	.
4065	04MAY85	.	.	.	.	.	.	.	.	.	.	6724.4	.	.
4066	05MAY85	.	.	.	.	.	.	.	.	.	.	6724.8	.	.
4067	06MAY85	.	.	.	.	.	.	.	.	.	.	6725.1	.	.
4068	07MAY85	.	.	.	.	.	.	.	.	.	.	6725.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RETORT

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4069	08MAY85	.	.	.	.	.	.	.	.	.	.	6725.6	.	.
4070	09MAY85	.	.	.	.	.	.	.	.	.	.	6725.9	.	.
4071	10MAY85	.	.	.	.	.	.	.	.	.	.	6726.3	.	.
4072	11MAY85	.	.	.	.	.	.	.	.	.	.	6726.4	.	.
4073	12MAY85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
4074	13MAY85	.	.	.	.	.	.	.	.	.	.	6726.7	.	.
4075	14MAY85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
4076	15MAY85	4763	.	7.9	232	8.6	4.8	5	540	0.4	140	6705.9	.	.
4077	16MAY85	5533	33.0	9.3	132	8.4	4.4	5	610	.	190	6671.1	.	.
4078	17MAY85	.	.	.	.	.	.	.	.	.	.	6648.4	.	.
4079	18MAY85	5578	33.0	9.2	.	20.4	.	.	620	.	.	6644.2	.	.
4080	19MAY85	5701	29.0	9.6	.	10.5	.	.	660	.	.	6628.9	.	.
4081	20MAY85	5454	31.0	10.1	.	7.8	.	.	680	.	.	6618.9	.	.
4082	21MAY85	5406	30.0	9.9	.	6.0	.	.	680	.	.	6626.9	.	.
4083	22MAY85	5228	32.0	9.9	110	12.0	4.2	5	650	.	82	6638.9	.	.
4084	23MAY85	4724	33.0	10.0	.	9.8	.	.	640	.	.	6645.3	.	.
4085	24MAY85	4539	32.5	10.2	.	6.8	.	.	500	.	.	6608.7	.	.
4086	25MAY85	4080	31.0	10.3	.	5.4	.	.	460	.	.	6599.4	.	.
4087	26MAY85	3723	32.2	10.2	.	4.8	.	.	420	.	.	6586.0	.	.
4088	27MAY85	3442	31.0	10.0	.	5.2	.	.	375	.	.	6577.9	.	.
4089	28MAY85	3126	30.5	9.8	.	4.0	.	.	330	.	.	6579.7	.	.
4090	29MAY85	2881	30.0	9.4	48	1.3	3.6	3	305	0.1	38	6565.1	.	.
4091	30MAY85	2688	25.0	9.5	.	1.1	.	.	230	.	.	6553.8	.	.
4092	31MAY85	2496	26.0	9.0	.	1.0	.	.	215	.	.	6546.5	.	.
4093	01JUN85	2408	.	9.2	.	0.4	.	.	215	.	.	6544.9	.	.
4094	02JUN85	2357	24.0	8.6	.	0.3	.	.	185	.	.	6647.0	.	.
4095	03JUN85	2328	24.0	8.4	.	1.1	.	.	190	.	.	6668.4	.	.
4096	04JUN85	2320	26.0	8.5	.	0.8	.	.	195	.	.	6679.6	.	.
4097	05JUN85	2268	26.0	8.8	40	0.8	5.1	-1	195	-0.1	38	6686.8	.	.
4098	06JUN85	2120	26.5	8.5	.	0.9	.	.	180	.	.	6692.2	.	.
4099	07JUN85	2281	26.0	8.2	60	0.7	.	3	172	-0.1	41	6695.2	.	.
4100	08JUN85	.	.	.	.	.	.	.	.	.	.	6700.5	.	.
4101	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.1	.	.
4102	10JUN85	2346	28.5	9.0	42	0.4	4.7	-1	190	0.1	45	6704.5	.	.
4103	11JUN85	2171	27.0	8.8	.	0.4	.	.	190	.	.	6706.4	.	.
4104	12JUN85	2117	28.5	8.0	.	0.7	.	.	210	.	.	6707.9	.	.
4105	13JUN85	2207	30.0	8.4	.	0.7	.	.	170	.	.	6708.8	.	.
4106	14JUN85	2199	.	8.1	.	2.6	.	.	165	.	.	6709.9	.	.
4107	15JUN85	1890	29.5	8.1	.	1.7	.	.	175	.	.	6710.8	.	.
4108	16JUN85	.	.	.	.	.	.	.	.	.	.	6711.5	.	.
4109	17JUN85	2014	29.0	8.0	.	1.5	.	.	175	.	.	6712.3	.	.
4110	18JUN85	1973	29.0	8.2	.	1.1	6.0	-1	175	0.1	30	6712.9	.	.
4111	19JUN85	2203	29.0	8.5	.	0.6	7.1	-1	104	0.1	.	6713.5	.	.
4112	20JUN85	2146	30.0	8.3	.	0.6	7.2	-1	105	0.1	.	6714.1	.	.
4113	21JUN85	2086	29.0	7.3	.	0.5	.	.	170	.	.	6714.6	.	.
4114	22JUN85	.	.	.	.	.	.	.	.	.	.	6714.9	.	.
4115	23JUN85	.	.	.	.	.	.	.	.	.	.	6715.4	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RETORT

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4116	24JUN85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
4117	25JUN85	2050	30.5	8.1	.	0.5	.	.	165	.	.	6716.3	.	.
4118	26JUN85	2243	30.0	7.3	.	0.6	.	-1	162	-0.1	28	6716.4	.	.
4119	27JUN85	.	.	.	.	.	.	.	.	.	.	6716.6	.	.
4120	28JUN85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
4121	29JUN85	.	.	.	.	.	.	.	.	.	.	6717.4	.	.
4122	30JUN85	.	.	.	.	.	.	.	.	.	.	6717.6	.	.
4123	01JUL85	2127	29.0	7.2	36	0.6	.	.	152	.	35	6717.8	.	.
4124	02JUL85	2226	29.0	7.7	32	0.6	.	.	155	.	37	6718.0	.	.
4125	03JUL85	2216	30.0	8.0	36	0.6	.	.	155	.	39	6718.3	.	.
4126	04JUL85	2226	29.0	7.5	36	0.6	.	.	160	.	32	6718.5	.	.
4127	05JUL85	2247	29.0	7.4	24	0.6	.	.	155	.	41	6718.7	.	.
4128	06JUL85	2247	30.5	7.8	44	0.6	.	.	151	.	38	6718.9	.	.
4129	07JUL85	2270	.	6.8	.	0.6	.	.	155	.	.	6719.1	.	.
4130	08JUL85	2264	.	7.6	.	0.6	.	.	157	.	.	6719.3	.	.
4131	09JUL85	.	.	.	.	.	.	.	.	.	.	6719.6	.	.
4132	10JUL85	2173	29.0	7.3	38	0.7	3.5	-1	148	.	38	6719.9	.	.
4133	11JUL85	2417	32.0	8.0	36	1.7	3.5	.	68	-0.1	25	6720.3	.	.
4134	12JUL85	2364	29.0	8.1	36	1.5	3.6	.	68	-0.1	25	6720.1	.	.
4135	14JUL85	2346	29.0	7.2	28	0.4	3.1	-1	160	-0.1	39	6720.3	.	.
4136	15JUL85	2346	29.0	7.7	20	0.4	3.2	-1	161	0.1	36	6720.4	.	.
4137	16JUL85	2366	29.0	7.7	32	0.4	3.3	-1	165	-0.1	35	6720.9	.	.
4138	17JUL85	2377	29.0	7.7	28	0.4	3.4	-1	164	-0.1	44	6721.2	.	.
4139	18JUL85	2378	29.0	7.9	.	0.9	.	.	160	.	.	6721.3	.	.
4140	19JUL85	2375	30.0	8.0	.	0.9	.	.	165	.	.	6721.4	.	.
4141	20JUL85	2403	28.0	8.1	.	0.9	.	.	170	.	.	6721.7	.	.
4142	21JUL85	2351	30.0	8.1	.	0.9	.	.	170	.	.	6721.8	.	.
4143	22JUL85	2332	29.0	8.1	24	0.8	3.2	-1	168	-0.1	35	6722.0	.	.
4144	23JUL85	2520	30.0	8.3	.	0.6	.	.	130	.	.	6722.2	.	.
4145	24JUL85	2550	29.0	8.3	40	0.7	4.8	-1	145	0.1	39	6722.4	.	.
4146	25JUL85	2460	28.0	8.2	20	0.9	3.6	.	158	-0.1	38	6722.4	.	.
4147	26JUL85	2460	25.0	8.2	20	1.0	3.6	.	155	-0.1	30	6722.6	.	.
4148	27JUL85	2430	28.0	8.4	32	1.0	3.7	.	155	-0.1	35	6722.8	.	.
4149	28JUL85	2290	30.5	8.5	28	1.0	3.5	-1	150	-0.1	35	6723.0	.	.
4150	29JUL85	2440	30.0	8.4	24	1.0	3.5	-1	150	-0.1	35	6723.3	.	.
4151	30JUL85	2440	30.5	8.5	24	0.9	3.8	-1	155	-0.1	35	6723.5	.	.
4152	31JUL85	2400	29.5	7.1	.	0.8	.	.	160	.	.	6723.7	.	.
4153	01AUG85	2470	29.5	8.2	.	0.8	.	.	159	.	.	6723.9	.	.
4154	02AUG85	2446	29.0	7.9	16	0.9	3.6	-1	162	-0.1	18	6724.1	.	.
4155	03AUG85	2500	29.0	8.3	28	0.9	3.7	-1	162	-0.1	18	6724.2	.	.
4156	04AUG85	2448	29.5	8.3	28	0.9	3.7	1	166	-0.1	22	6724.4	.	.
4157	05AUG85	2519	29.5	8.4	.	0.7	.	.	105	.	.	6724.6	.	.
4158	06AUG85	2500	30.5	8.5	32	0.8	3.1	-1	105	-0.1	23	6724.7	.	.
4159	07AUG85	2668	30.0	8.5	40	0.9	3.7	-1	170	-0.1	20	6724.8	.	.
4160	08AUG85	2546	30.0	8.5	40	0.9	3.7	-1	170	-0.1	5	6725.0	.	.
4161	09AUG85	2546	29.5	8.5	40	0.9	3.8	-1	170	-0.1	20	6725.0	.	.
4162	10AUG85	2546	29.0	8.4	32	0.9	3.8	-1	172	-0.1	18	6725.2	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RETORT

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4163	11AUG85	2512	28.5	8.4	.	0.7	.	.	105	.	.	6725.4	.	.
4164	12AUG85	2534	30.0	8.5	.	1.0	.	.	105	.	.	6725.4	.	.
4165	13AUG85	2538	30.0	8.6	24	0.9	3.4	-1	105	-0.1	32	6725.5	.	.
4166	14AUG85	2573	28.5	8.4	.	1.1	.	.	105	.	.	6725.6	.	.
4167	15AUG85	2543	30.0	8.2	.	0.8	.	.	104	.	.	6725.7	.	.
4168	16AUG85	2598	30.0	8.5	28	0.9	3.5	-1	165	-0.1	20	6725.8	.	.
4169	17AUG85	2598	30.0	8.0	28	0.9	3.5	-1	165	-0.1	12	6725.9	.	.
4170	18AUG85	2611	30.0	8.4	28	0.8	3.5	-1	165	-0.1	25	6723.4	.	.
4171	20AUG85	2652	30.0	8.2	28	0.7	3.5	-1	175	-0.1	10	6720.1	.	.
4172	22AUG85	2641	31.0	7.7	28	1.0	3.5	-1	175	-0.1	15	6724.6	.	.
4173	23AUG85	2550	30.5	7.7	28	1.0	3.6	-1	170	-0.1	12	6725.2	.	.
4174	24AUG85	2550	32.0	7.9	28	1.0	3.6	-1	160	-0.1	12	6725.6	.	.
4175	25AUG85	2550	32.0	8.1	36	1.1	3.6	-1	130	-0.1	25	6725.9	.	.
4176	26AUG85	2550	31.0	8.0	36	1.0	3.6	-1	135	-0.1	25	6726.0	.	.
4177	27AUG85	2550	32.0	7.9	36	1.0	3.8	-1	140	-0.1	30	6725.9	.	.
4178	28AUG85	2500	32.0	7.9	36	1.0	3.8	-1	140	-0.1	25	6726.2	.	.
4179	29AUG85	2500	33.0	7.9	36	1.0	3.7	-1	140	-0.1	25	6726.4	.	.
4180	30AUG85	2500	33.0	7.8	36	1.0	3.8	-1	150	-0.1	32	6726.6	.	.
4181	31AUG85	2621	33.5	8.2	.	0.6	.	.	132	.	.	6726.7	.	.
4182	01SEP85	2613	33.0	8.2	.	0.6	.	.	138	.	.	6726.7	.	.
4183	02SEP85	2637	32.0	8.2	.	0.7	.	.	141	.	.	6726.8	.	.
4184	03SEP85	2644	33.0	8.2	.	0.7	.	.	148	.	.	6726.8	.	.
4185	04SEP85	2700	32.0	8.3	.	0.6	.	.	148	.	.	6726.5	.	.
4186	05SEP85	2679	31.0	8.4	.	0.6	.	.	130	.	.	6726.9	.	.
4187	06SEP85	2730	26.0	7.7	20	0.6	3.3	.	140	.	10	6727.0	.	.
4188	07SEP85	2700	26.0	7.7	24	0.6	3.4	.	145	.	30	6726.5	.	.
4189	08SEP85	.	.	.	.	.	.	.	.	.	.	6727.1	.	.
4190	09SEP85	2700	30.0	7.6	24	0.6	3.4	.	145	.	18	6727.2	.	.
4191	10SEP85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
4192	11SEP85	2720	31.0	7.5	24	0.6	3.4	.	150	.	25	6727.2	.	.
4193	12SEP85	2700	30.0	7.5	24	0.6	3.3	.	155	.	15	6727.2	.	.
4194	13SEP85	2670	32.0	7.5	24	0.6	3.4	.	155	.	20	6727.2	.	.
4195	14SEP85	2670	30.0	7.5	24	0.7	3.4	.	160	.	22	6727.2	.	.
4196	15SEP85	2480	31.0	7.9	.	0.6	.	.	160	.	.	6727.3	.	.
4197	16SEP85	2580	30.0	7.7	.	0.6	.	.	160	.	.	6727.4	.	.
4198	17SEP85	2580	32.5	7.6	.	0.6	.	.	158	.	.	6727.7	.	.
4199	18SEP85	2630	29.0	7.9	.	1.0	.	.	180	.	.	6727.3	.	.
4200	19SEP85	2700	30.0	7.9	.	1.0	.	.	165	.	.	6727.4	.	.
4201	20SEP85	2750	32.0	7.8	.	1.0	.	.	170	.	.	6727.0	.	.
4202	21SEP85	2750	32.0	7.7	.	1.0	.	.	165	.	.	6727.3	.	.
4203	22SEP85	2675	32.5	7.6	20	0.5	3.4	.	170	.	32	6727.3	.	.
4204	23SEP85	2716	32.5	7.9	.	0.5	.	.	155	.	.	6720.0	.	.
4205	25SEP85	2560	32.0	7.7	.	0.6	.	.	165	.	.	6727.0	.	.
4206	26SEP85	2600	32.5	7.6	.	0.6	.	.	165	.	.	6727.2	.	.
4207	27SEP85	2750	32.0	7.5	.	0.6	.	.	165	.	.	6727.3	.	.
4208	28SEP85	2800	27.0	7.5	.	0.6	.	.	165	.	.	6727.2	.	.
4209	29SEP85	2750	33.0	7.5	20	0.7	3.5	.	165	.	32	6727.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RETORT

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4210	30SEP85	2633	33	7.3	.	0.2	.	.	101	.	.	6720.1	.	.
4211	01OCT85	2677	33	7.7	.	0.7	.	.	100	.	.	6724.5	.	.
4212	02OCT85	.	.	.	.	.	.	.	.	.	.	6726.0	.	.
4213	03OCT85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
4214	04OCT85	.	.	.	.	.	.	.	.	.	.	6726.7	.	.
4215	05OCT85	.	.	.	.	.	.	.	.	.	.	6727.0	.	.
4216	06OCT85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
4217	07OCT85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
4218	08OCT85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
4219	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
4220	10OCT85	.	.	.	.	.	.	.	.	.	.	6727.5	.	.
4221	11OCT85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
4222	12OCT85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
4223	13OCT85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
4224	14OCT85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
4225	15OCT85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
4226	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
4227	17OCT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
4228	18OCT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
4229	19OCT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
4230	20OCT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
4231	21OCT85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
4232	22OCT85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
4233	23OCT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
4234	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
4235	25OCT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
4236	26OCT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
4237	27OCT85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
4238	28OCT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
4239	29OCT85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
4240	30OCT85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
4241	31OCT85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
4242	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
4243	02NOV85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
4244	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
4245	04NOV85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
4246	05NOV85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
4247	06NOV85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
4248	07NOV85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
4249	08NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
4250	09NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
4251	10NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
4252	11NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
4253	12NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
4254	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
4255	14NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
4256	15NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RETORT

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4257	16NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
4258	17NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
4259	18NOV85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.
4260	19NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
4261	20NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
4262	21NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
4263	22NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
4264	23NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
4265	24NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
4266	25NOV85	.	.	.	.	.	.	.	.	.	.	6731.5	.	.
4267	26NOV85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
4268	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
4269	28NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
4270	29NOV85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
4271	30NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
4272	01DEC85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
4273	02DEC85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
4274	03DEC85	.	.	.	.	.	.	.	.	.	.	6729.1	.	.
4275	04DEC85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
4276	05DEC85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
4277	06DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
4278	07DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
4279	08DEC85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
4280	09DEC85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
4281	10DEC85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
4282	11DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
4283	12DEC85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
4284	13DEC85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
4285	14DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
4286	15DEC85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
4287	16DEC85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
4288	17DEC85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
4289	18DEC85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
4290	19DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
4291	20DEC85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
4292	21DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
4293	22DEC85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
4294	23DEC85	.	.	.	.	.	.	.	.	.	.	6727.7	.	.
4295	24DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
4296	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.8	.	.
4297	26DEC85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
4298	27DEC85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
4299	28DEC85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
4300	29DEC85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
4301	30DEC85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
4302	31DEC85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RW-5

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4303	05DEC85	2998	25.0	9.8	.	1.1	.	.	205	.	.	.	.	.
4304	06DEC85	2998	26.0	10.1	.	0.9	.	.	210	.	.	.	.	.
4305	07DEC85	2912	25.0	10.1	.	1.7	.	.	215	.	.	.	.	.
4306	08DEC85	2912	25.0	10.2	.	1.7	.	.	212	.	.	.	.	.
4307	09DEC85	2831	27.0	8.0	.	1.6	.	.	198	.	.	.	.	.
4308	10DEC85	2962	27.5	10.2	.	1.4	.	.	212	.	.	.	.	.
4309	11DEC85	2894	28.0	10.2	40	0.8	2.8	.	210	.	31	.	.	.
4310	12DEC85	2915	27.0	10.2	.	1.8	.	.	208	.	.	.	.	.
4311	13DEC85	2867	28.0	10.2	.	1.3	.	.	210	.	.	.	.	.
4312	14DEC85	2867	28.0	10.3	.	1.2	.	.	209	.	.	.	.	.
4313	15DEC85	2844	29.0	10.2	.	1.6	.	.	210	.	.	.	.	.
4314	16DEC85	2806	29.0	10.1	.	1.5	.	.	211	.	.	.	.	.
4315	17DEC85	2728	32.2	9.8	.	1.2	.	.	209	.	.	.	.	.
4316	18DEC85	2870	31.5	10.1	.	1.1	.	.	190	.	.	.	.	.
4317	19DEC85	2855	29.0	10.2	.	1.1	.	.	210	.	.	.	.	.
4318	20DEC85	2906	29.0	10.2	.	1.1	.	.	210	.	.	.	.	.
4319	21DEC85	2915	30.0	10.2	.	1.1	.	.	210	.	.	.	.	.
4320	22DEC85	2962	30.0	10.2	.	1.1	.	.	210	.	.	.	.	.
4321	23DEC85	2854	28.5	10.2	.	1.1	.	.	210	.	.	.	.	.
4322	25DEC85	2949	30.5	10.2	.	1.1	.	.	210	.	.	.	.	.
4323	26DEC85	2750	30.0	10.3	.	1.1	.	.	210	.	.	.	.	.
4324	27DEC85	2859	30.0	10.3	.	1.1	.	.	212	.	.	.	.	.
4325	28DEC85	2884	30.0	10.3	.	1.1	.	.	212	.	.	.	.	.
4326	29DEC85	2884	29.5	10.3	.	1.1	.	.	211	.	.	.	.	.
4327	30DEC85	2884	29.5	10.3	.	1.1	.	.	210	.	.	.	.	.
4328	31DEC85	2894	30.5	10.3	.	1.1	.	.	214	.	.	.	.	.

STATION TYPE=RTAB STATION LOCATION=RW-6

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4329	05DEC85	2775	30.5	7.4	.	0.8	.	.	190	.	.	.	.	.
4330	06DEC85	2868	24.0	7.5	.	1.0	.	.	190	.	.	.	.	.
4331	07DEC85	2801	30.0	7.6	.	1.5	.	.	190	.	.	.	.	.
4332	08DEC85	2796	25.0	7.5	.	1.6	.	.	192	.	.	.	.	.
4333	09DEC85	2801	27.0	7.4	.	1.4	.	.	189	.	.	.	.	.
4334	10DEC85	2796	31.0	7.4	.	1.4	.	.	192	.	.	.	.	.
4335	11DEC85	2777	27.5	8.3	36	0.7	2.7	.	193	.	31	.	.	.
4336	12DEC85	2731	29.0	7.7	.	1.5	.	.	190	.	.	.	.	.
4337	13DEC85	2594	29.0	7.6	.	1.3	.	.	188	.	.	.	.	.
4338	14DEC85	2742	30.0	7.6	.	1.4	.	.	185	.	.	.	.	.
4339	15DEC85	2664	31.0	7.5	.	1.4	.	.	183	.	.	.	.	.
4340	16DEC85	2699	28.0	7.6	.	1.2	.	.	182	.	.	.	.	.
4341	17DEC85	2654	29.4	7.6	.	1.3	.	.	182	.	.	.	.	.
4342	18DEC85	2768	28.5	7.5	.	1.1	.	.	182	.	.	.	.	.
4343	19DEC85	2734	29.0	7.5	.	1.1	.	.	182	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=RTAB STATION LOCATION=RW-6

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4344	20DEC85	2662	29.0	7.5	.	1.0	.	.	181	.	.	.	.	.
4345	21DEC85	2610	30.0	7.5	.	1.1	.	.	182	.	.	.	.	.
4346	23DEC85	2722	31.5	7.6	.	1.1	.	.	186	.	.	.	.	.
4347	25DEC85	2691	31.5	7.5	.	1.1	.	.	182	.	.	.	.	.
4348	26DEC85	2681	32.0	7.6	.	1.1	.	.	182	.	.	.	.	.
4349	27DEC85	2732	31.0	7.7	.	1.0	.	.	184	.	.	.	.	.
4350	28DEC85	2707	31.0	7.7	.	1.0	.	.	182	.	.	.	.	.
4351	29DEC85	2657	30.5	7.7	.	1.0	.	.	181	.	.	.	.	.
4352	30DEC85	2667	30.0	7.7	.	1.0	.	.	181	.	.	.	.	.
4353	31DEC85	2712	31.0	7.7	.	1.0	.	.	182	.	.	.	.	.

STATION TYPE=SEEP STATION LOCATION=SPG-MILL

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4354	09JAN85	1800	10.0	7.3	.	.	.	.	.	.	.	.	2.0	.
4355	14MAY85	1809	11.7	7.9	.	-1.0	.	.	2	.	.	.	2.1	.
4356	21MAY85	1785	14.0	8.0	.	-1.0	.	.	1	.	.	.	2.1	.
4357	24MAY85	1785	14.0	7.9	.	-1.0	.	.	1	.	.	.	2.2	.
4358	29MAY85	1852	12.7	7.9	.	-1.0	.	.	1	.	.	.	2.2	.
4359	31MAY85	1748	10.1	7.9	.	-1.0	.	.	1	.	.	.	2.4	.
4360	04JUN85	1800	14.7	7.6	.	-0.1	.	.	1	.	.	.	2.2	.
4361	07JUN85	1843	15.3	7.9	.	-0.1	.	.	2	.	.	.	2.2	.
4362	13JUN85	1762	16.3	7.7	.	-0.1	.	.	1	.	.	.	2.3	.

STATION TYPE=SEEP STATION LOCATION=SPG-8

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4363	14MAY85	.	.	.	.	.	.	.	.	.	.	.	8032	.
4364	21MAY85	.	.	.	.	.	.	.	.	.	.	.	4946	.
4365	29MAY85	.	.	.	.	.	.	.	.	.	.	.	3918	.
4366	04JUN85	.	.	.	.	.	.	.	.	.	.	.	3527	.
4367	13JUN85	.	.	.	.	.	.	.	.	.	.	.	2646	.

STATION TYPE=UPPA STATION LOCATION=AM-3U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4368	07MAY85	1122	11.2	8.3	348	-1.0	1.5	-1	-1	-0.1	15	6902.4	.	.
4369	11JUN85	1106	10.6	8.1	.	-0.1	.	.	-1	.	.	6902.3	.	.
4370	26JUL85	.	.	.	.	.	.	.	.	.	.	6901.8	.	.
4371	16OCT85	.	.	.	.	.	.	.	.	.	.	6897.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=CE-701U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4372	15MAY85	.	.	.	.	.	.	.	.	.	.	6893.6	.	.
4373	16MAY85	.	.	.	.	.	.	.	.	.	.	6894.8	.	.
4374	17MAY85	.	.	.	.	.	.	.	.	.	.	6895.9	.	.
4375	18MAY85	.	.	.	.	.	.	.	.	.	.	6896.5	.	.
4376	19MAY85	.	.	.	.	.	.	.	.	.	.	6897.4	.	.
4377	20MAY85	.	.	.	.	.	.	.	.	.	.	6895.9	.	.
4378	21MAY85	.	.	.	.	.	.	.	.	.	.	6896.7	.	.
4379	30MAY85	.	.	.	.	.	.	.	.	.	.	6904.7	.	.
4380	01JUN85	.	.	.	.	.	.	.	.	.	.	6905.9	.	.
4381	02JUN85	.	.	.	.	.	.	.	.	.	.	6906.7	.	.
4382	03JUN85	.	.	.	.	.	.	.	.	.	.	6907.2	.	.
4383	04JUN85	.	.	.	.	.	.	.	.	.	.	6907.6	.	.
4384	05JUN85	.	.	.	.	.	.	.	.	.	.	6908.0	.	.
4385	06JUN85	.	.	.	.	.	.	.	.	.	.	6908.1	.	.
4386	07JUN85	.	.	.	.	.	.	.	.	.	.	6908.3	.	.
4387	11JUN85	.	.	.	.	.	.	.	.	.	.	6908.9	.	.
4388	17JUN85	.	.	.	.	.	.	.	.	.	.	6909.3	.	.
4389	27JUL85	.	.	.	.	.	.	.	.	.	.	6907.1	.	.
4390	16OCT85	.	.	.	.	.	.	.	.	.	.	6899.8	.	.

STATION TYPE=UPPA STATION LOCATION=CE-702U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4391	08MAY85	1397	14	8.3	484	-1.0	2.2	-1	-1	-0.1	18	6607.4	.	.
4392	15MAY85	.	.	.	.	.	.	.	.	.	.	6604.5	.	.
4393	16MAY85	.	.	.	.	.	.	.	.	.	.	6611.5	.	.
4394	17MAY85	.	.	.	.	.	.	.	.	.	.	6609.1	.	.
4395	18MAY85	.	.	.	.	.	.	.	.	.	.	6607.2	.	.
4396	19MAY85	.	.	.	.	.	.	.	.	.	.	6608.1	.	.
4397	20MAY85	.	.	.	.	.	.	.	.	.	.	6606.9	.	.
4398	21MAY85	.	.	.	.	.	.	.	.	.	.	6607.8	.	.
4399	30MAY85	.	.	.	.	.	.	.	.	.	.	6624.3	.	.
4400	01JUN85	.	.	.	.	.	.	.	.	.	.	6618.2	.	.
4401	02JUN85	.	.	.	.	.	.	.	.	.	.	6606.8	.	.
4402	03JUN85	.	.	.	.	.	.	.	.	.	.	6606.5	.	.
4403	04JUN85	.	.	.	.	.	.	.	.	.	.	6606.5	.	.
4404	05JUN85	.	.	.	.	.	.	.	.	.	.	6606.3	.	.
4405	06JUN85	.	.	.	.	.	.	.	.	.	.	6606.0	.	.
4406	07JUN85	.	.	.	.	.	.	.	.	.	.	6605.9	.	.
4407	11JUN85	1463	14	8.1	.	-0.1	.	.	-1	.	.	6605.2	.	.
4408	17JUN85	.	.	.	.	.	.	.	.	.	.	6604.6	.	.
4409	26JUL85	.	.	.	.	.	.	.	.	.	.	6601.4	.	.
4410	16OCT85	.	.	.	.	.	.	.	.	.	.	6597.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=CE-705AU

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4411	07MAY85	1346	10.3	7.7	348	-1.0	0.5	-1	-1	-0.1	45	6720.2	.	.
4412	15MAY85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
4413	16MAY85	.	.	.	.	.	.	.	.	.	.	6700.5	.	.
4414	17MAY85	.	.	.	.	.	.	.	.	.	.	6692.7	.	.
4415	18MAY85	.	.	.	.	.	.	.	.	.	.	6690.3	.	.
4416	19MAY85	.	.	.	.	.	.	.	.	.	.	6683.1	.	.
4417	20MAY85	.	.	.	.	.	.	.	.	.	.	6675.6	.	.
4418	21MAY85	.	.	.	.	.	.	.	.	.	.	6676.5	.	.
4419	30MAY85	.	.	.	.	.	.	.	.	.	.	6656.4	.	.
4420	01JUN85	.	.	.	.	.	.	.	.	.	.	6655.1	.	.
4421	02JUN85	.	.	.	.	.	.	.	.	.	.	6670.7	.	.
4422	03JUN85	.	.	.	.	.	.	.	.	.	.	6680.8	.	.
4423	04JUN85	.	.	.	.	.	.	.	.	.	.	6687.4	.	.
4424	05JUN85	.	.	.	.	.	.	.	.	.	.	6691.9	.	.
4425	06JUN85	.	.	.	.	.	.	.	.	.	.	6694.9	.	.
4426	07JUN85	.	.	.	.	.	.	.	.	.	.	6697.3	.	.
4427	11JUN85	1235	9.4	7.5	.	-0.1	.	.	-1	.	.	6703.8	.	.
4428	17JUN85	.	.	.	.	.	.	.	.	.	.	6707.9	.	.
4429	26JUL85	.	.	.	.	.	.	.	.	.	.	6714.7	.	.
4430	16OCT85	.	.	.	.	.	.	.	.	.	.	6720.4	.	.

STATION TYPE=UPPA STATION LOCATION=CE-707U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4431	15MAY85	.	.	.	.	.	.	.	.	.	.	7013.7	.	.
4432	23MAY85	.	.	.	.	.	.	.	.	.	.	7007.2	.	.
4433	30MAY85	.	.	.	.	.	.	.	.	.	.	7003.8	.	.
4434	27JUL85	.	.	.	.	.	.	.	.	.	.	6990.2	.	.
4435	16OCT85	.	.	.	.	.	.	.	.	.	.	7010.9	.	.

STATION TYPE=UPPA STATION LOCATION=CE-708U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4436	08MAY85	1122	10.2	7.8	352	-1.0	0.8	.	-1	-0.1	15	6873.5	.	.
4437	15MAY85	.	.	.	.	.	.	.	.	.	.	6873.6	.	.
4438	23MAY85	.	.	.	.	.	.	.	.	.	.	6871.2	.	.
4439	30MAY85	.	.	.	.	.	.	.	.	.	.	6873.3	.	.
4440	11JUN85	1019	10.0	7.8	.	0.1	.	.	-1	.	.	6872.0	.	.
4441	27JUL85	.	.	.	.	.	.	.	.	.	.	6867.9	.	.
4442	16OCT85	.	.	.	.	.	.	.	.	.	.	6866.2	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=CE-709U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4443	02JAN85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
4444	09JAN85	.	.	.	.	.	.	.	.	.	.	6717.2	.	.
4445	16JAN85	.	.	.	.	.	.	.	.	.	.	6717.3	.	.
4446	23JAN85	.	.	.	.	.	.	.	.	.	.	6717.0	.	.
4447	30JAN85	.	.	.	.	.	.	.	.	.	.	6718.0	.	.
4448	06FEB85	.	.	.	.	.	.	.	.	.	.	6718.1	.	.
4449	13FEB85	.	.	.	.	.	.	.	.	.	.	6717.9	.	.
4450	21FEB85	.	.	.	.	.	.	.	.	.	.	6717.8	.	.
4451	27FEB85	.	.	.	.	.	.	.	.	.	.	6718.0	.	.
4452	06MAR85	.	.	.	.	.	.	.	.	.	.	6718.2	.	.
4453	14MAR85	.	.	.	.	.	.	.	.	.	.	6719.0	.	.
4454	20MAR85	.	.	.	.	.	.	.	.	.	.	6720.2	.	.
4455	28MAR85	.	.	.	.	.	.	.	.	.	.	6722.9	.	.
4456	09APR85	.	.	.	.	.	.	.	.	.	.	6724.0	.	.
4457	18APR85	.	.	.	.	.	.	.	.	.	.	6725.9	.	.
4458	25APR85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
4459	08MAY85	1734	10.0	7.1	430	-1.0	0.5	-1	1	-0.1	25	6731.1	.	.
4460	15MAY85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
4461	16MAY85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
4462	17MAY85	.	.	.	.	.	.	.	.	.	.	6706.6	.	.
4463	18MAY85	.	.	.	.	.	.	.	.	.	.	6703.8	.	.
4464	19MAY85	.	.	.	.	.	.	.	.	.	.	6797.3	.	.
4465	20MAY85	.	.	.	.	.	.	.	.	.	.	6689.1	.	.
4466	21MAY85	.	.	.	.	.	.	.	.	.	.	6689.3	.	.
4467	30MAY85	.	.	.	.	.	.	.	.	.	.	6668.7	.	.
4468	01JUN85	.	.	.	.	.	.	.	.	.	.	6661.8	.	.
4469	02JUN85	.	.	.	.	.	.	.	.	.	.	6676.0	.	.
4470	03JUN85	.	.	.	.	.	.	.	.	.	.	6685.7	.	.
4471	04JUN85	.	.	.	.	.	.	.	.	.	.	6692.5	.	.
4472	05JUN85	.	.	.	.	.	.	.	.	.	.	6696.8	.	.
4473	06JUN85	.	.	.	.	.	.	.	.	.	.	6699.7	.	.
4474	07JUN85	.	.	.	.	.	.	.	.	.	.	6702.2	.	.
4475	11JUN85	1544	10.1	7.2	.	-0.1	.	.	-1	.	.	6709.5	.	.
4476	17JUN85	.	.	.	.	.	.	.	.	.	.	6714.0	.	.
4477	27JUL85	.	.	.	.	.	.	.	.	.	.	6726.2	.	.
4478	16OCT85	.	.	.	.	.	.	.	.	.	.	6731.6	.	.

STATION TYPE=UPPA STATION LOCATION=GS-D1U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4479	27JUL85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
4480	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=GS-D3U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4481	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.8	.	.
4482	09JAN85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
4483	16JAN85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
4484	23JAN85	.	.	.	.	.	.	.	.	.	.	6715.5	.	.
4485	30JAN85	.	.	.	.	.	.	.	.	.	.	6716.0	.	.
4486	06FEB85	.	.	.	.	.	.	.	.	.	.	6716.1	.	.
4487	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.9	.	.
4488	21FEB85	.	.	.	.	.	.	.	.	.	.	6715.3	.	.
4489	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
4490	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.6	.	.
4491	14MAR85	.	.	.	.	.	.	.	.	.	.	6717.1	.	.
4492	20MAR85	.	.	.	.	.	.	.	.	.	.	6718.3	.	.
4493	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.9	.	.
4494	09APR85	.	.	.	.	.	.	.	.	.	.	6721.7	.	.
4495	18APR85	.	.	.	.	.	.	.	.	.	.	6723.5	.	.
4496	25APR85	.	.	.	.	.	.	.	.	.	.	6724.9	.	.
4497	08MAY85	2295	12.8	7.0	412	-1.0	0.5	-1	-1	0.2	20	6728.4	.	.
4498	15MAY85	.	.	.	.	.	.	.	.	.	.	6711.2	.	.
4499	16MAY85	.	.	.	.	.	.	.	.	.	.	6676.5	.	.
4500	17MAY85	.	.	.	.	.	.	.	.	.	.	6651.5	.	.
4501	18MAY85	.	.	.	.	.	.	.	.	.	.	6646.2	.	.
4502	19MAY85	.	.	.	.	.	.	.	.	.	.	6708.5	.	.
4503	20MAY85	.	.	.	.	.	.	.	.	.	.	6624.2	.	.
4504	21MAY85	.	.	.	.	.	.	.	.	.	.	6630.0	.	.
4505	22MAY85	.	.	.	.	.	.	.	.	.	.	6646.2	.	.
4506	23MAY85	.	.	.	.	.	.	.	.	.	.	6651.0	.	.
4507	24MAY85	.	.	.	.	.	.	.	.	.	.	6620.9	.	.
4508	25MAY85	.	.	.	.	.	.	.	.	.	.	6608.8	.	.
4509	26MAY85	.	.	.	.	.	.	.	.	.	.	6601.7	.	.
4510	27MAY85	.	.	.	.	.	.	.	.	.	.	6594.4	.	.
4511	28MAY85	.	.	.	.	.	.	.	.	.	.	6598.5	.	.
4512	29MAY85	.	.	.	.	.	.	.	.	.	.	6589.3	.	.
4513	30MAY85	.	.	.	.	.	.	.	.	.	.	6580.3	.	.
4514	31MAY85	.	.	.	.	.	.	.	.	.	.	6573.0	.	.
4515	01JUN85	.	.	.	.	.	.	.	.	.	.	6570.9	.	.
4516	02JUN85	.	.	.	.	.	.	.	.	.	.	6648.4	.	.
4517	03JUN85	.	.	.	.	.	.	.	.	.	.	6667.7	.	.
4518	04JUN85	.	.	.	.	.	.	.	.	.	.	6683.4	.	.
4519	05JUN85	.	.	.	.	.	.	.	.	.	.	6689.6	.	.
4520	06JUN85	.	.	.	.	.	.	.	.	.	.	6694.0	.	.
4521	07JUN85	.	.	.	.	.	.	.	.	.	.	6698.2	.	.
4522	08JUN85	.	.	.	.	.	.	.	.	.	.	6701.4	.	.
4523	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.9	.	.
4524	10JUN85	.	.	.	.	.	.	.	.	.	.	6705.4	.	.
4525	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.9	.	.
4526	12JUN85	1814	13.3	7.4	.	0.2	.	.	-1	.	.	6708.3	.	.
4527	13JUN85	.	.	.	.	.	.	.	.	.	.	6709.5	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=GS-D3U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4528	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
4529	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.9	.	.
4530	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.8	.	.
4531	11JUL85	.	.	.	.	.	.	.	.	.	.	6720.5	.	.
4532	17JUL85	.	.	.	.	.	.	.	.	.	.	6721.5	.	.
4533	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.7	.	.
4534	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.9	.	.
4535	07AUG85	.	.	.	.	.	.	.	.	.	.	6725.2	.	.
4536	14AUG85	.	.	.	.	.	.	.	.	.	.	6726.1	.	.
4537	21AUG85	.	.	.	.	.	.	.	.	.	.	6720.5	.	.
4538	28AUG85	.	.	.	.	.	.	.	.	.	.	6726.7	.	.
4539	04SEP85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
4540	12SEP85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
4541	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
4542	25SEP85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.
4543	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
4544	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
4545	24OCT85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
4546	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.7	.	.
4547	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.8	.	.
4548	13NOV85	.	.	.	.	.	.	.	.	.	.	6729.2	.	.
4549	22NOV85	.	.	.	.	.	.	.	.	.	.	6729.4	.	.
4550	27NOV85	.	.	.	.	.	.	.	.	.	.	6729.6	.	.
4551	04DEC85	2045	12.2	7.7	400	0.1	0.4	.	-1	.	22	6729.1	.	.
4552	12DEC85	.	.	.	.	.	.	.	.	.	.	6729.3	.	.
4553	19DEC85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
4554	25DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.

STATION TYPE=UPPA STATION LOCATION=GS-D5U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4555	02JAN85	.	.	.	.	.	.	.	.	.	.	6712.8	.	.
4556	09JAN85	.	.	.	.	.	.	.	.	.	.	6713.1	.	.
4557	16JAN85	.	.	.	.	.	.	.	.	.	.	6713.2	.	.
4558	23JAN85	.	.	.	.	.	.	.	.	.	.	6713.6	.	.
4559	30JAN85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
4560	06FEB85	.	.	.	.	.	.	.	.	.	.	6714.1	.	.
4561	13FEB85	.	.	.	.	.	.	.	.	.	.	6714.0	.	.
4562	21FEB85	.	.	.	.	.	.	.	.	.	.	6713.7	.	.
4563	27FEB85	.	.	.	.	.	.	.	.	.	.	6713.8	.	.
4564	06MAR85	.	.	.	.	.	.	.	.	.	.	6713.9	.	.
4565	14MAR85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
4566	20MAR85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
4567	28MAR85	.	.	.	.	.	.	.	.	.	.	6718.1	.	.
4568	09APR85	.	.	.	.	.	.	.	.	.	.	6719.9	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=GS-D5U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4569	18APR85	.	.	.	.	.	.	.	.	.	.	6721.5	.	.
4570	25APR85	.	.	.	.	.	.	.	.	.	.	6722.8	.	.
4571	22MAY85	1794	15.5	7.4	470	-1.0	1.1	-1	1	-0.1	20	.	.	.
4572	23MAY85	1737	15.0	7.6	.	-1.0	.	.	1	.	.	.	.	.
4573	24MAY85	1326	16.5	7.4	.	-1.0	.	.	-1	.	.	.	.	.
4574	25MAY85	1826	16.0	7.4	.	-1.0	.	.	-1	.	.	.	.	.
4575	26MAY85	1744	15.6	7.7	.	-1.0	.	.	-1	.	.	.	.	.
4576	27MAY85	1669	15.0	7.5	.	-1.0	.	.	1	.	.	.	.	.
4577	28MAY85	1743	15.0	7.6	.	-1.0	.	.	-1	.	.	.	.	.
4578	29MAY85	1657	15.0	7.5	488	-1.0	1.1	-1	1	-0.1	15	.	.	.
4579	30MAY85	1626	14.0	7.6	.	-1.0	.	.	-1	.	.	.	.	.
4580	31MAY85	1675	14.0	7.6	.	-1.0	.	.	-1	.	.	.	.	.
4581	18AUG85	1860	15.5	7.8	460	0.2	0.8	-1	-1	-0.1	10	.	.	.
4582	19AUG85	1836	15.5	7.8	464	0.2	0.8	-1	-1	-0.1	-1	.	.	.
4583	20AUG85	1836	15.5	7.6	464	0.2	0.8	-1	-1	-0.1	-1	.	.	.
4584	30SEP85	1862	15.4	7.6	.	0.6	.	.	-1	.	.	.	.	.

STATION TYPE=UPPA STATION LOCATION=GS-D6U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4585	15MAY85	.	.	.	.	.	.	.	.	.	.	6721.8	.	.
4586	16MAY85	.	.	.	.	.	.	.	.	.	.	6708.1	.	.
4587	17MAY85	.	.	.	.	.	.	.	.	.	.	6697.1	.	.
4588	18MAY85	.	.	.	.	.	.	.	.	.	.	6695.2	.	.
4589	19MAY85	.	.	.	.	.	.	.	.	.	.	6682.8	.	.
4590	20MAY85	.	.	.	.	.	.	.	.	.	.	6677.5	.	.
4591	21MAY85	.	.	.	.	.	.	.	.	.	.	6679.4	.	.
4592	30MAY85	.	.	.	.	.	.	.	.	.	.	6656.5	.	.
4593	01JUN85	.	.	.	.	.	.	.	.	.	.	6649.1	.	.
4594	02JUN85	.	.	.	.	.	.	.	.	.	.	6676.5	.	.
4595	03JUN85	.	.	.	.	.	.	.	.	.	.	6685.8	.	.
4596	04JUN85	.	.	.	.	.	.	.	.	.	.	6691.5	.	.
4597	05JUN85	.	.	.	.	.	.	.	.	.	.	6691.2	.	.
4598	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.8	.	.
4599	07JUN85	.	.	.	.	.	.	.	.	.	.	6700.0	.	.
4600	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.4	.	.
4601	17JUN85	.	.	.	.	.	.	.	.	.	.	6711.6	.	.
4602	27JUL85	.	.	.	.	.	.	.	.	.	.	6723.2	.	.
4603	16OCT85	.	.	.	.	.	.	.	.	.	.	6729.0	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=GS-D7U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4604	01JUN85	.	.	.	.	.	.	.	.	.	.	6756.8	.	.
4605	02JUN85	.	.	.	.	.	.	.	.	.	.	6670.7	.	.
4606	03JUN85	.	.	.	.	.	.	.	.	.	.	6676.1	.	.
4607	04JUN85	.	.	.	.	.	.	.	.	.	.	6682.2	.	.
4608	05JUN85	.	.	.	.	.	.	.	.	.	.	6686.0	.	.
4609	06JUN85	.	.	.	.	.	.	.	.	.	.	6688.5	.	.
4610	07JUN85	.	.	.	.	.	.	.	.	.	.	6690.6	.	.
4611	11JUN85	.	.	.	.	.	.	.	.	.	.	6696.4	.	.
4612	17JUN85	.	.	.	.	.	.	.	.	.	.	6700.7	.	.
4613	27JUL85	.	.	.	.	.	.	.	.	.	.	6707.5	.	.
4614	16OCT85	.	.	.	.	.	.	.	.	.	.	6710.2	.	.

STATION TYPE=UPPA STATION LOCATION=GS-D8U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4615	15MAY85	.	.	.	.	.	.	.	.	.	.	6707.7	.	.
4616	16MAY85	.	.	.	.	.	.	.	.	.	.	6701.6	.	.
4617	17MAY85	.	.	.	.	.	.	.	.	.	.	6697.9	.	.
4618	18MAY85	.	.	.	.	.	.	.	.	.	.	6696.6	.	.
4619	19MAY85	.	.	.	.	.	.	.	.	.	.	6693.1	.	.
4620	20MAY85	.	.	.	.	.	.	.	.	.	.	6687.5	.	.
4621	21MAY85	.	.	.	.	.	.	.	.	.	.	6687.0	.	.
4622	30MAY85	.	.	.	.	.	.	.	.	.	.	6676.2	.	.
4623	01JUN85	.	.	.	.	.	.	.	.	.	.	6675.4	.	.
4624	02JUN85	.	.	.	.	.	.	.	.	.	.	6681.9	.	.
4625	03JUN85	.	.	.	.	.	.	.	.	.	.	6686.8	.	.
4626	04JUN85	.	.	.	.	.	.	.	.	.	.	6690.3	.	.
4627	05JUN85	.	.	.	.	.	.	.	.	.	.	6692.8	.	.
4628	06JUN85	.	.	.	.	.	.	.	.	.	.	6694.5	.	.
4629	07JUN85	.	.	.	.	.	.	.	.	.	.	6695.9	.	.
4630	11JUN85	.	.	.	.	.	.	.	.	.	.	6699.3	.	.
4631	17JUN85	.	.	.	.	.	.	.	.	.	.	6701.5	.	.
4632	26JUL85	.	.	.	.	.	.	.	.	.	.	6704.5	.	.
4633	16OCT85	.	.	.	.	.	.	.	.	.	.	6705.5	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=GS-MDP2CU

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4634	02JAN85	.	.	.	.	.	.	.	.	.	.	6714.0	.	.
4635	09JAN85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.
4636	16JAN85	.	.	.	.	.	.	.	.	.	.	6714.4	.	.
4637	23JAN85	.	.	.	.	.	.	.	.	.	.	6714.8	.	.
4638	30JAN85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
4639	06FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
4640	13FEB85	.	.	.	.	.	.	.	.	.	.	6715.2	.	.
4641	21FEB85	.	.	.	.	.	.	.	.	.	.	6714.8	.	.
4642	27FEB85	.	.	.	.	.	.	.	.	.	.	6715.0	.	.
4643	06MAR85	.	.	.	.	.	.	.	.	.	.	6715.1	.	.
4644	14MAR85	.	.	.	.	.	.	.	.	.	.	6716.3	.	.
4645	20MAR85	.	.	.	.	.	.	.	.	.	.	6717.5	.	.
4646	28MAR85	.	.	.	.	.	.	.	.	.	.	6719.2	.	.
4647	09APR85	.	.	.	.	.	.	.	.	.	.	6720.9	.	.
4648	18APR85	.	.	.	.	.	.	.	.	.	.	6722.7	.	.
4649	25APR85	.	.	.	.	.	.	.	.	.	.	6724.1	.	.
4650	08MAY85	2856	12.7	7.1	468	-1.0	1.1	-1	2	0.1	28	6727.8	.	.
4651	15MAY85	.	.	.	.	.	.	.	.	.	.	6717.8	.	.
4652	16MAY85	.	.	.	.	.	.	.	.	.	.	6686.2	.	.
4653	17MAY85	.	.	.	.	.	.	.	.	.	.	6669.6	.	.
4654	18MAY85	.	.	.	.	.	.	.	.	.	.	6663.6	.	.
4655	19MAY85	.	.	.	.	.	.	.	.	.	.	6652.0	.	.
4656	20MAY85	.	.	.	.	.	.	.	.	.	.	6644.4	.	.
4657	21MAY85	.	.	.	.	.	.	.	.	.	.	6645.8	.	.
4658	22MAY85	.	.	.	.	.	.	.	.	.	.	6655.6	.	.
4659	23MAY85	1819	12.0	7.1	468	-1.0	0.8	-1	-1	-0.1	12	6656.0	.	.
4660	24MAY85	.	.	.	.	.	.	.	.	.	.	6640.5	.	.
4661	25MAY85	.	.	.	.	.	.	.	.	.	.	6633.1	.	.
4662	26MAY85	.	.	.	.	.	.	.	.	.	.	6626.2	.	.
4663	27MAY85	.	.	.	.	.	.	.	.	.	.	6620.5	.	.
4664	28MAY85	.	.	.	.	.	.	.	.	.	.	6621.2	.	.
4665	29MAY85	.	.	.	.	.	.	.	.	.	.	6615.6	.	.
4666	30MAY85	.	.	.	.	.	.	.	.	.	.	6609.9	.	.
4667	01JUN85	.	.	.	.	.	.	.	.	.	.	6604.1	.	.
4668	02JUN85	.	.	.	.	.	.	.	.	.	.	6651.3	.	.
4669	03JUN85	.	.	.	.	.	.	.	.	.	.	6667.5	.	.
4670	04JUN85	.	.	.	.	.	.	.	.	.	.	6682.3	.	.
4671	05JUN85	.	.	.	.	.	.	.	.	.	.	6688.3	.	.
4672	06JUN85	.	.	.	.	.	.	.	.	.	.	6693.1	.	.
4673	07JUN85	.	.	.	.	.	.	.	.	.	.	6697.2	.	.
4674	08JUN85	.	.	.	.	.	.	.	.	.	.	6700.5	.	.
4675	09JUN85	.	.	.	.	.	.	.	.	.	.	6703.0	.	.
4676	10JUN85	.	.	.	.	.	.	.	.	.	.	6704.6	.	.
4677	11JUN85	.	.	.	.	.	.	.	.	.	.	6706.2	.	.
4678	12JUN85	2117	12.4	7.1	.	0.2	.	.	-1	.	.	6707.5	.	.
4679	13JUN85	.	.	.	.	.	.	.	.	.	.	6708.7	.	.
4680	19JUN85	.	.	.	.	.	.	.	.	.	.	6713.1	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=GS-MDP2CU

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4681	26JUN85	.	.	.	.	.	.	.	.	.	.	6716.2	.	.
4682	03JUL85	.	.	.	.	.	.	.	.	.	.	6718.1	.	.
4683	11JUL85	.	.	.	.	.	.	.	.	.	.	6719.8	.	.
4684	17JUL85	.	.	.	.	.	.	.	.	.	.	6720.9	.	.
4685	25JUL85	.	.	.	.	.	.	.	.	.	.	6722.1	.	.
4686	31JUL85	.	.	.	.	.	.	.	.	.	.	6723.4	.	.
4687	07AUG85	.	.	.	.	.	.	.	.	.	.	6724.5	.	.
4688	14AUG85	.	.	.	.	.	.	.	.	.	.	6725.3	.	.
4689	21AUG85	.	.	.	.	.	.	.	.	.	.	6723.0	.	.
4690	28AUG85	.	.	.	.	.	.	.	.	.	.	6726.1	.	.
4691	04SEP85	.	.	.	.	.	.	.	.	.	.	6726.5	.	.
4692	12SEP85	.	.	.	.	.	.	.	.	.	.	6726.9	.	.
4693	18SEP85	.	.	.	.	.	.	.	.	.	.	6727.4	.	.
4694	25SEP85	.	.	.	.	.	.	.	.	.	.	6726.8	.	.
4695	09OCT85	.	.	.	.	.	.	.	.	.	.	6727.2	.	.
4696	16OCT85	.	.	.	.	.	.	.	.	.	.	6728.0	.	.
4697	24OCT85	.	.	.	.	.	.	.	.	.	.	6727.9	.	.
4698	01NOV85	.	.	.	.	.	.	.	.	.	.	6728.2	.	.
4699	03NOV85	.	.	.	.	.	.	.	.	.	.	6728.1	.	.
4700	13NOV85	.	.	.	.	.	.	.	.	.	.	6728.5	.	.
4701	22NOV85	.	.	.	.	.	.	.	.	.	.	6728.6	.	.
4702	27NOV85	.	.	.	.	.	.	.	.	.	.	6728.9	.	.
4703	04DEC85	.	.	.	.	.	.	.	.	.	.	6728.4	.	.
4704	19DEC85	.	.	.	.	.	.	.	.	.	.	6728.3	.	.
4705	25DEC85	.	.	.	.	.	.	.	.	.	.	6727.6	.	.

STATION TYPE=UPPA STATION LOCATION=GS-M1U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4706	15MAY85	.	.	.	.	.	.	.	.	.	.	6843.9	.	.
4707	23MAY85	.	.	.	.	.	.	.	.	.	.	6843.8	.	.
4708	30MAY85	.	.	.	.	.	.	.	.	.	.	6845.6	.	.
4709	31JUL85	.	.	.	.	.	.	.	.	.	.	6851.7	.	.
4710	17OCT85	.	.	.	.	.	.	.	.	.	.	6851.8	.	.

STATION TYPE=UPPA STATION LOCATION=GS-M10U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4711	07MAY85	1275	8.9	7.4	346	-1.0	1.7	-1	1	-0.1	10	6687.9	.	.
4712	12JUN85	1310	9.0	7.4	.	0.1	.	.	-1	.	.	6687.5	.	.
4713	31JUL85	.	.	.	.	.	.	.	.	.	.	6687.2	.	.
4714	17OCT85	.	.	.	.	.	.	.	.	.	.	6686.2	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=GS-M12U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4715	07MAY85	1428	13.0	7.4	372	-1.0	0.8	-1	2	-0.1	5	6635.9	.	.
4716	12JUN85	1512	12.9	7.5	.	0.4	.	.	-1	.	.	6633.3	.	.
4717	31JUL85	.	.	.	.	.	.	.	.	.	.	6633.2	.	.
4718	17OCT85	.	.	.	.	.	.	.	.	.	.	6631.4	.	.

STATION TYPE=UPPA STATION LOCATION=GS-M3U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4719	07MAY85	1326	8.4	9.8	560	1.4	2.2	-1	2	-0.1	20	6309.1	.	.
4720	12JUN85	1300	8.5	9.8	.	0.7	.	.	1	.	.	6309.2	.	.
4721	31JUL85	.	.	.	.	.	.	.	.	.	.	6309.4	.	.
4722	17OCT85	.	.	.	.	.	.	.	.	.	.	6309.9	.	.

STATION TYPE=UPPA STATION LOCATION=GS-M4U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4723	15MAY85	.	.	.	.	.	.	.	.	.	.	6665.2	.	.
4724	23MAY85	.	.	.	.	.	.	.	.	.	.	6665.9	.	.
4725	30MAY85	.	.	.	.	.	.	.	.	.	.	6665.2	.	.
4726	31JUL85	.	.	.	.	.	.	.	.	.	.	6650.6	.	.
4727	17OCT85	.	.	.	.	.	.	.	.	.	.	6649.9	.	.

STATION TYPE=UPPA STATION LOCATION=GS-M6U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4728	15MAY85	.	.	.	.	.	.	.	.	.	.	6645.1	.	.
4729	23MAY85	.	.	.	.	.	.	.	.	.	.	6645.1	.	.
4730	30MAY85	.	.	.	.	.	.	.	.	.	.	6629.3	.	.
4731	31JUL85	.	.	.	.	.	.	.	.	.	.	6649.1	.	.
4732	17OCT85	.	.	.	.	.	.	.	.	.	.	6650.0	.	.

STATION TYPE=UPPA STATION LOCATION=GS-M8U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4733	15MAY85	.	.	.	.	.	.	.	.	.	.	6532.5	.	.
4734	23MAY85	.	.	.	.	.	.	.	.	.	.	6530.6	.	.
4735	30MAY85	.	.	.	.	.	.	.	.	.	.	6534.0	.	.
4736	31JUL85	.	.	.	.	.	.	.	.	.	.	6533.8	.	.
4737	17OCT85	.	.	.	.	.	.	.	.	.	.	6530.0	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=GS-M9U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4738	07MAY85	2759	11.7	6.8	692	-1.0	0.3	-1	2	-0.1	5	6695.8	.	.
4739	12JUN85	2722	11.7	6.9	.	0.2	.	.	2	.	.	6694.7	.	.
4740	26JUL85	.	.	.	.	.	.	.	.	.	.	6694.0	.	.
4741	31JUL85	.	.	.	.	.	.	.	.	.	.	6694.0	.	.
4742	17OCT85	.	.	.	.	.	.	.	.	.	.	6694.7	.	.

STATION TYPE=UPPA STATION LOCATION=GS-10U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4743	15MAY85	.	.	.	.	.	.	.	.	.	.	6675.1	.	.
4744	23MAY85	.	.	.	.	.	.	.	.	.	.	6677.6	.	.
4745	30MAY85	.	.	.	.	.	.	.	.	.	.	6679.0	.	.
4746	26JUL85	.	.	.	.	.	.	.	.	.	.	6661.0	.	.
4747	17OCT85	.	.	.	.	.	.	.	.	.	.	6656.1	.	.

STATION TYPE=UPPA STATION LOCATION=GS-13U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4748	15MAY85	.	.	.	.	.	.	.	.	.	.	6799.0	.	.
4749	23MAY85	.	.	.	.	.	.	.	.	.	.	6799.6	.	.
4750	30MAY85	.	.	.	.	.	.	.	.	.	.	6800.9	.	.
4751	26JUL85	.	.	.	.	.	.	.	.	.	.	6803.0	.	.
4752	17OCT85	.	.	.	.	.	.	.	.	.	.	6802.1	.	.

STATION TYPE=UPPA STATION LOCATION=GS-15U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4753	07MAY85	2015	13.7	8.1	422	-1.0	0.5	-1	1	-0.1	10	6707.8	.	.
4754	12JUN85	2026	13.7	8.0	.	0.2	.	.	-1	.	.	6704.0	.	.
4755	26JUL85	.	.	.	.	.	.	.	.	.	.	6704.6	.	.
4756	17OCT85	.	.	.	.	.	.	.	.	.	.	6706.3	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=GS-2-3U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4757	15MAY85	.	.	.	.	.	.	.	.	.	.	6766.0	.	.
4758	23MAY85	.	.	.	.	.	.	.	.	.	.	6757.1	.	.
4759	30MAY85	.	.	.	.	.	.	.	.	.	.	6754.5	.	.
4760	01JUN85	.	.	.	.	.	.	.	.	.	.	6752.8	.	.
4761	02JUN85	.	.	.	.	.	.	.	.	.	.	6753.5	.	.
4762	03JUN85	.	.	.	.	.	.	.	.	.	.	6754.0	.	.
4763	04JUN85	.	.	.	.	.	.	.	.	.	.	6755.2	.	.
4764	05JUN85	.	.	.	.	.	.	.	.	.	.	6756.0	.	.
4765	06JUN85	.	.	.	.	.	.	.	.	.	.	6756.5	.	.
4766	07JUN85	.	.	.	.	.	.	.	.	.	.	6757.1	.	.
4767	11JUN85	.	.	.	.	.	.	.	.	.	.	6758.7	.	.
4768	17JUN85	.	.	.	.	.	.	.	.	.	.	6761.0	.	.
4769	27JUL85	.	.	.	.	.	.	.	.	.	.	6767.6	.	.
4770	16OCT85	.	.	.	.	.	.	.	.	.	.	6769.7	.	.

STATION TYPE=UPPA STATION LOCATION=GS-4-5U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4771	01JUN85	.	.	.	.	.	.	.	.	.	.	6701.1	.	.
4772	02JUN85	.	.	.	.	.	.	.	.	.	.	6673.7	.	.
4773	03JUN85	.	.	.	.	.	.	.	.	.	.	6663.4	.	.
4774	04JUN85	.	.	.	.	.	.	.	.	.	.	6658.5	.	.
4775	05JUN85	.	.	.	.	.	.	.	.	.	.	6655.8	.	.
4776	06JUN85	.	.	.	.	.	.	.	.	.	.	6654.1	.	.
4777	07JUN85	.	.	.	.	.	.	.	.	.	.	6652.9	.	.
4778	11JUN85	.	.	.	.	.	.	.	.	.	.	6649.0	.	.
4779	17JUN85	.	.	.	.	.	.	.	.	.	.	6648.0	.	.
4780	27JUL85	.	.	.	.	.	.	.	.	.	.	6646.0	.	.
4781	16OCT85	.	.	.	.	.	.	.	.	.	.	6665.1	.	.

STATION TYPE=UPPA STATION LOCATION=GS-6U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4782	01JUN85	.	.	.	.	.	.	.	.	.	.	6642.3	.	.
4783	02JUN85	.	.	.	.	.	.	.	.	.	.	6627.9	.	.
4784	03JUN85	.	.	.	.	.	.	.	.	.	.	6612.2	.	.
4785	04JUN85	.	.	.	.	.	.	.	.	.	.	6610.1	.	.
4786	05JUN85	.	.	.	.	.	.	.	.	.	.	6608.6	.	.
4787	06JUN85	.	.	.	.	.	.	.	.	.	.	6607.5	.	.
4788	07JUN85	.	.	.	.	.	.	.	.	.	.	6606.8	.	.
4789	11JUN85	.	.	.	.	.	.	.	.	.	.	6604.6	.	.
4790	17JUN85	.	.	.	.	.	.	.	.	.	.	6602.7	.	.
4791	26JUL85	.	.	.	.	.	.	.	.	.	.	6599.5	.	.

RIO BLANCO OIL SHALE COMPANY
RETORT ABANDONMENT PROGRAM - ONSITE MONITORING
MASTER PRINT OF DATA SET ONSITE.MASTER

STATION TYPE=UPPA STATION LOCATION=GS-6U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4792	16OCT85	.	.	.	.	.	.	.	.	.	.	6597.2	.	.

STATION TYPE=UPPA STATION LOCATION=GS-9U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4793	15MAY85	.	.	.	.	.	.	.	.	.	.	6827.3	.	.
4794	23MAY85	.	.	.	.	.	.	.	.	.	.	6828.0	.	.
4795	30MAY85	.	.	.	.	.	.	.	.	.	.	6827.6	.	.
4796	26JUL85	.	.	.	.	.	.	.	.	.	.	6821.4	.	.
4797	16OCT85	.	.	.	.	.	.	.	.	.	.	6816.1	.	.

STATION TYPE=UPPA STATION LOCATION=TO-3U

OBS	DATE	SP_COND	TEMP	PH	ALK	NH3	F	S	K	PHE	COD	WLELEV	FLOW	WLDEPTH
4798	01JUN85	.	.	.	.	.	.	.	.	.	.	6635.1	.	.
4799	02JUN85	.	.	.	.	.	.	.	.	.	.	6620.9	.	.
4800	03JUN85	.	.	.	.	.	.	.	.	.	.	6619.0	.	.
4801	04JUN85	.	.	.	.	.	.	.	.	.	.	6617.3	.	.
4802	05JUN85	.	.	.	.	.	.	.	.	.	.	6616.1	.	.
4803	06JUN85	.	.	.	.	.	.	.	.	.	.	6615.2	.	.
4804	07JUN85	.	.	.	.	.	.	.	.	.	.	6614.5	.	.
4805	11JUN85	.	.	.	.	.	.	.	.	.	.	6612.5	.	.
4806	17JUN85	.	.	.	.	.	.	.	.	.	.	6610.7	.	.
4807	26JUL85	.	.	.	.	.	.	.	.	.	.	6606.3	.	.
4808	16OCT85	.	.	.	.	.	.	.	.	.	.	6604.6	.	.

APPENDIX 5-1.2

1985 Water Year USGS Data

- Daily Field Measurements Data Listing
- Water Chemistry Data Listing

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=B-CORRAL GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
1	01OCT84	1.30	8.2	13.4	5.0	.	.	.	.	.
2	02OCT84	1.30	9.5	14.2	6.5	.	.	.	.	.
3	03OCT84	1.20	8.8	14.4	5.7	1641	1650	1620	.	.
4	04OCT84	1.40	8.7	10.9	7.8	1598	1668	1358	.	.
5	05OCT84	1.20	9.1	13.5	6.4	1656	1676	1636	.	.
6	06OCT84	1.20	8.0	13.3	5.4	1654	1673	1633	.	.
7	07OCT84	1.20	7.8	13.3	4.6	1648	1661	1631	.	.
8	08OCT84	1.20	7.9	15.3	4.4	1649	1669	1629	.	.
9	09OCT84	1.10	8.0	14.8	4.5	1657	1677	1637	.	.
10	10OCT84	1.10	8.0	14.2	5.1	1664	1674	1654	.	.
11	11OCT84	1.10	8.0	13.5	4.7	1667	1682	1652	.	.
12	12OCT84	1.20	6.4	7.6	3.4	1612	1680	1480	.	.
13	13OCT84	1.20	6.5	12.6	2.7	1664	1678	1638	.	.
14	14OCT84	1.10	5.9	9.3	3.0	1646	1676	1586	.	.
15	15OCT84	1.10	3.6	7.1	1.7	1668	1693	1633	.	.
16	16OCT84	1.10	3.5	9.2	0.8	1673	1701	1641	.	.
17	17OCT84	1.10	3.0	7.7	0.2	1655	1699	1549	.	.
18	18OCT84	1.10	3.1	7.7	1.0	1665	1697	1637	.	.
19	19OCT84	1.10	4.0	8.0	2.1	1656	1674	1624	.	.
20	20OCT84	1.10	4.9	8.4	3.0	1656	1672	1632	.	.
21	21OCT84	1.10	4.4	7.0	2.9	1654	1670	1640	.	.
22	22OCT84	1.00	4.1	8.8	1.4	1647	1680	1610	.	.
23	23OCT84	1.00	4.0	7.6	1.6	1643	1666	1616	.	.
24	24OCT84	1.00	3.3	8.1	1.0	1650	1672	1612	.	.
25	25OCT84	0.93	3.2	8.4	0.8	1660	1688	1618	.	.
26	26OCT84	0.93	4.2	8.9	1.3	1655	1674	1624	.	.
27	27OCT84	0.93	3.2	7.3	0.7	1643	1699	1569	.	.
28	28OCT84	0.84	2.9	7.6	0.6	1681	1725	1615	.	.
29	29OCT84	0.78	4.8	9.9	2.4	1671	1691	1631	.	.
30	30OCT84	0.78	5.0	9.6	2.7	1676	1697	1647	.	.
31	31OCT84	0.86	4.9	7.6	2.7	1656	1673	1613	.	.
32	01NOV84	0.78	3.1	7.7	0.8	1682	1699	1649	.	.
33	02NOV84	0.78	4.0	8.8	1.4	1689	1745	1615	.	.
34	03NOV84	0.78	4.0	7.6	1.8	1668	1691	1601	.	.
35	04NOV84	0.77	2.8	7.1	0.9	1603	1626	1566	.	.
36	05NOV84	0.66	3.4	7.9	0.7	1618	1652	1572	.	.
37	06NOV84	0.66	4.6	8.0	3.0	1648	1698	1598	.	.
38	07NOV84	0.66	4.3	7.6	2.6	1676	1694	1644	.	.
39	08NOV84	0.66	3.4	6.9	0.1	1638	1700	1560	.	.
40	09NOV84	0.66	2.2	5.7	0.2	1628	1666	1586	.	.
41	10NOV84	0.61	1.8	4.5	0.0	1646	1703	1563	.	.
42	11NOV84	0.61	3.8	7.5	1.3	1622	1639	1599	.	.
43	12NOV84	0.61	3.6	7.8	1.3	1624	1645	1605	.	.
44	13NOV84	0.61	4.5	7.6	2.7	1615	1641	1581	.	.
45	14NOV84	0.61	2.8	5.0	0.6	1619	1638	1598	.	.
46	15NOV84	0.56	1.5	4.7	0.3	1622	1664	1564	.	.
47	16NOV84	0.56	3.0	6.7	0.6	1597	1620	1560	.	.
48	17NOV84	0.56	2.7	6.0	0.5	1612	1627	1587	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=B-CORRAL GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
49	18NOV84	0.51	1.3	4.6	0.2	1624	1663	1563.0	.	.
50	19NOV84	0.51	1.1	3.9	0.2	1620	1659	1569.0	.	.
51	20NOV84	0.47	1.2	4.3	0.2	1607	1646	1546.0	.	.
52	21NOV84	0.47	1.9	5.2	0.2	1599	1632	1562.0	.	.
53	22NOV84	0.37	2.5	5.5	0.9	1593	1608	1568.0	.	.
54	23NOV84	0.37	2.7	6.4	0.6	1593	1614	1574.0	.	.
55	24NOV84	0.42	3.3	6.2	1.2	1596	1611	1571.1	.	.
56	25NOV84	0.42	2.8	5.1	0.9	1583	1607	1547.0	.	.
57	26NOV84	0.42	1.5	3.8	0.0	1599	1633	1583.0	.	.
58	27NOV84	0.42	0.1	0.8	0.0	1626	1710	1560.0	.	.
59	28NOV84	0.42	1.4	2.4	0.5	1574	1586	1556.0	.	.
60	29NOV84	0.42	1.3	3.7	0.0	1593	1602	1572.0	.	.
61	30NOV84	0.42	1.1	3.5	0.1	1612	1619	1599.0	.	.
62	01DEC84	0.42	1.1	3.0	0.0	1622	1635	1605.0	.	.
63	02DEC84	0.42	0.0	0.2	0.0	1659	1681	1631.0	.	.
64	03DEC84	0.42	1.5	3.8	0.0	1654	1667	1617.0	.	.
65	04DEC84	0.42	0.2	1.2	0.0	1672	1694	1654.0	.	.
66	05DEC84	0.42	0.1	0.3	0.0	1720	1780	1660.0	.	.
67	06DEC84	0.42	0.1	0.6	0.0	1752	1780	1720.0	.	.
68	07DEC84	0.32	0.9	2.6	0.0	1724	1740	1710.0	.	.
69	08DEC84	0.32	2.4	3.7	0.7	1712	1730	1690.0	.	.
70	09DEC84	0.27	2.5	4.1	1.6	1709	1720	1700.0	.	.
71	10DEC84	0.27	3.0	4.4	1.5	1700	1710	1680.0	.	.
72	11DEC84	0.41	3.2	4.6	1.6	1678	1700	1650.0	.	.
73	12DEC84	0.42	2.2	3.8	0.4	1667	1690	1630.0	.	.
74	13DEC84	0.42	1.0	1.5	0.5	1666	1680	1650.0	.	.
75	14DEC84	0.42	0.6	1.5	0.0	1674	1680	1670.0	.	.
76	15DEC84	0.42	1.4	3.0	0.1	1663	1680	1650.0	.	.
77	16DEC84	0.37	1.8	3.3	0.3	1655	1670	1640.0	.	.
78	17DEC84	0.32	0.8	2.2	0.0	1665	1710	1620.0	.	.
79	18DEC84	0.47	1.8	3.6	0.6	1640	1650	1620.0	.	.
80	19DEC84	0.47	2.1	3.7	1.1	1625	1640	1550.0	.	.
81	20DEC84	0.37	2.1	4.6	0.1	1589	1640	1530.0	.	.
82	21DEC84	0.47	0.7	2.5	0.0	1620	1670	1560.0	.	.
83	22DEC84	0.49	0.2	0.9	0.0	1605	1690	1510.0	.	.
84	23DEC84	0.47	0.6	2.3	0.0	.	.	.	.	.
85	24DEC84	0.47	0.9	2.2	0.0	.	.	.	.	.
86	25DEC84	0.47	0.9	2.9	0.0	.	.	.	.	.
87	26DEC84	0.47	2.1	3.5	0.6	.	.	.	.	.
88	27DEC84	0.47	3.7	4.7	2.9	.	.	.	.	.
89	28DEC84	0.42	3.2	3.7	2.8	.	.	.	.	.
90	29DEC84	0.37	3.0	4.5	0.4	.	.	.	.	.
91	30DEC84	0.37	2.3	5.3	0.3	.	.	.	.	.
92	31DEC84	0.37	1.6	4.4	0.1	.	.	.	.	.
93	01JAN85	0.37	0.1	0.8	0.0	.	.	.	.	.
94	02JAN85	0.43	0.1	0.6	0.0	.	.	.	.	.
95	03JAN85	0.32	0.4	1.7	0.0	1603	1660	1530.0	.	.
96	04JAN85	0.32	0.7	2.0	0.0	1684	1770	1610.0	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=B-CORRAL GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
97	05JAN85	0.32	1.2	3.0	0.0	1686	1730	1650	.	.
98	06JAN85	0.32	2.4	3.9	1.7	1639	1670	1610	.	.
99	07JAN85	0.32	3.3	4.7	2.2	1595	1620	1570	.	.
100	08JAN85	0.32	3.5	4.0	2.8	1595	1650	1540	.	.
101	09JAN85	0.37	2.5	4.1	1.1	1596	1620	1580	.	.
102	10JAN85	0.37	2.4	4.2	0.6	1602	1620	1580	.	.
103	11JAN85	0.42	1.9	3.9	0.0	1601	1630	1580	.	.
104	12JAN85	0.39	0.2	1.5	0.0	1622	1680	1580	.	.
105	13JAN85	0.42	0.2	1.0	0.0	1634	1690	1530	.	.
106	14JAN85	0.42	0.6	2.2	0.0	1585	1620	1520	.	.
107	15JAN85	0.37	1.2	3.2	0.0	1605	1620	1580	.	.
108	16JAN85	0.37	0.9	3.0	0.0	1588	1620	1540	.	.
109	17JAN85	0.37	1.5	3.7	0.0	1598	1620	1560	.	.
110	18JAN85	0.37	2.1	3.8	1.1	1594	1610	1570	.	.
111	19JAN85	0.37	2.8	4.4	1.2	1581	1600	1510	.	.
112	20JAN85	0.42	2.5	4.7	0.4	1582	1600	1550	.	.
113	21JAN85	0.46	2.5	3.6	0.9	1563	1590	1520	.	.
114	22JAN85	0.42	1.0	2.7	0.0	1580	1600	1550	.	.
115	23JAN85	0.37	0.2	1.5	0.0	1577	1610	1550	.	.
116	24JAN85	0.42	0.2	1.2	0.0	1591	1620	1550	.	.
117	25JAN85	0.47	0.6	2.2	0.0	1580	1620	1540	.	.
118	26JAN85	0.42	1.5	3.0	0.1	1572	1580	1560	.	.
119	27JAN85	0.42	2.2	3.9	1.2	1571	1590	1540	.	.
120	28JAN85	0.42	2.0	3.9	0.6	1563	1580	1530	.	.
121	29JAN85	0.43	1.5	2.6	0.6	1570	1580	1540	.	.
122	30JAN85	0.42	0.3	1.8	0.0	1584	1670	1530	.	.
123	31JAN85	0.99	0.0	0.1	0.0	1672	1840	1630	.	.
124	01FEB85	1.10	0.0	0.1	0.0	.	.	.	.	.
125	02FEB85	1.10	.	.	.	.	.	.	.	.
126	03FEB85	1.10	1.9	3.0	0.9	1561	1720	1520	.	.
127	04FEB85	1.00	1.1	2.4	0.0	1586	1610	1560	.	.
128	05FEB85	1.00	1.3	2.7	0.0	1643	1750	1590	.	.
129	06FEB85	0.56	1.4	2.6	0.4	1603	1610	1590	.	.
130	07FEB85	0.22	1.7	3.2	0.0	1588	1620	1510	.	.
131	08FEB85	0.22	2.4	3.1	1.6	1499	1510	1490	.	.
132	09FEB85	0.27	2.3	2.8	2.0	1495	1510	1420	.	.
133	10FEB85	0.27	1.4	2.9	0.0	1493	1500	1480	.	.
134	11FEB85	0.27	1.5	3.7	0.0	1522	1640	1490	.	.
135	12FEB85	0.32	2.4	3.9	1.1	1531	1540	1520	.	.
136	13FEB85	0.32	2.1	4.3	0.9	1539	1560	1530	.	.
137	14FEB85	0.32	1.7	4.5	0.0	1544	1560	1530	.	.
138	15FEB85	0.38	2.2	4.5	0.6	1468	1560	1350	.	.
139	16FEB85	0.42	2.1	4.9	0.3	1372	1450	1290	.	.
140	17FEB85	0.32	2.5	5.4	0.5	1407	1440	1380	.	.
141	18FEB85	0.27	1.3	5.5	0.0	1452	1530	1410	.	.
142	19FEB85	0.37	1.6	5.1	0.0	1380	1530	1230	.	.
143	20FEB85	0.51	3.3	5.4	1.9	1253	1420	740	.	.
144	21FEB85	0.47	3.2	7.6	0.3	1380	1420	1170	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=B-CORRAL GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
145	22FEB85	0.44	2.3	6.3	0.1	1351	1450	1150	.	.
146	23FEB85	0.42	1.6	5.9	0.1	1379	1440	1110	.	.
147	24FEB85	0.27	1.5	6.0	0.0	1257	1330	1000	.	.
148	25FEB85	0.47	2.2	6.5	0.2	1429	1470	1320	.	.
149	26FEB85	0.51	1.6	5.9	0.0	1324	1410	1080	.	.
150	27FEB85	1.47	2.0	6.2	0.0	1296	1400	1070	.	.
151	28FEB85	0.42	1.7	6.9	0.0	1280	1390	1140	.	.
152	01MAR85	0.45	2.2	7.3	0.1	1256	1380	1020	.	.
153	02MAR85	0.42	2.8	6.4	0.3	1333	1380	1220	.	.
154	03MAR85	0.66	0.9	4.6	0.0	1253	1390	1140	.	.
155	04MAR85	0.32	0.7	4.4	0.0	1190	1260	1100	.	.
156	05MAR85	0.42	1.8	6.0	0.0	1251	1370	1160	.	.
157	06MAR85	0.42	2.7	8.2	0.1	1145	1190	1000	.	.
158	07MAR85	0.42	2.1	7.5	0.1	1195	1390	990	.	.
159	08MAR85	0.51	2.7	8.7	0.0	1181	1540	1080	.	.
160	09MAR85	0.47	4.3	10.2	1.1	.	.	.	.	.
161	10MAR85	0.56	4.3	6.6	3.2	.	.	.	.	.
162	11MAR85	0.61	5.0	8.2	3.1	.	.	.	.	.
163	12MAR85	0.32	4.2	9.5	0.2	1472	1530	1420	.	.
164	13MAR85	0.33	2.9	10.5	0.0	1448	1650	1320	.	.
165	14MAR85	0.37	3.8	12.1	0.0	1260	1470	1040	.	.
166	15MAR85	0.56	4.3	10.9	6.6	1093	1120	980	.	.
167	16MAR85	0.64	4.1	11.4	0.3	.	.	.	.	.
168	17MAR85	0.61	3.9	8.3	0.9	.	.	.	.	.
169	18MAR85	0.61	4.4	8.9	1.5	.	.	.	.	.
170	19MAR85	1.70	3.4	10.3	0.6	.	.	.	.	.
171	20MAR85	1.60	2.7	9.6	0.8	.	.	.	.	.
172	21MAR85	1.60	3.0	11.0	0.0	.	.	.	.	.
173	22MAR85	0.79	2.6	8.6	0.0	.	.	.	.	.
174	23MAR85	0.47	3.9	11.7	0.2	.	.	.	.	.
175	24MAR85	2.60	3.1	11.7	0.8	.	.	.	.	.
176	25MAR85	4.60	3.7	11.7	1.2	.	.	.	.	.
177	26MAR85	4.00	4.2	10.6	0.5	.	.	.	.	.
178	27MAR85	3.80	1.9	5.6	0.2	.	.	.	.	.
179	28MAR85	3.60	4.0	10.3	0.8	.	.	.	.	.
180	29MAR85	3.90	1.3	2.9	0.2	.	.	.	.	.
181	30MAR85	3.80	3.4	10.1	0.0	.	.	.	.	.
182	31MAR85	3.80	4.2	12.1	1.4	.	.	.	.	.
183	01APR85	3.90	5.2	12.8	1.0	.	.	.	.	.
184	02APR85	5.90	4.7	14.8	1.1	.	.	.	.	.
185	03APR85	7.80	3.6	13.1	1.3	.	.	.	.	.
186	04APR85	5.00	3.6	7.6	1.4	.	.	.	.	.
187	05APR85	4.20	4.5	12.3	1.1	.	.	.	.	.
188	06APR85	4.30	5.6	12.6	2.1	.	.	.	.	.
189	07APR85	4.30	6.3	13.9	2.0	.	.	.	.	.
190	08APR85	4.50	6.8	13.2	2.9	.	.	.	.	.
191	09APR85	4.30	7.4	14.2	4.0	1381	1475	1215	.	.
192	10APR85	4.10	7.6	15.6	3.3	1288	1404	1134	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=B-CORRAL GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
193	11APR85	3.3	7.7	14.2	4.1	849	1104	604	.	.
194	12APR85	3.8	8.1	15.4	4.3	1340	1473	1273	.	.
195	13APR85	5.0	7.8	15.4	3.4	1243	1313	1123	.	.
196	14APR85	5.2	8.4	16.1	4.0	.	.	.	.	.
197	15APR85	5.0	8.2	15.1	4.2	.	.	.	.	.
198	16APR85	4.2	8.4	15.0	5.0	.	.	.	.	.
199	17APR85	2.9	8.6	14.4	5.3	.	.	.	.	.
200	18APR85	6.2	7.8	12.0	5.4	.	.	.	.	.
201	19APR85	6.7	5.6	8.2	4.2	.	.	.	.	.
202	20APR85	7.3	5.8	10.5	2.7	.	.	.	.	.
203	21APR85	8.1	6.6	10.2	3.7	.	.	.	.	.
204	22APR85	8.2	5.5	9.4	3.8	.	.	.	.	.
205	23APR85	6.7	7.2	13.8	2.8	.	.	.	.	.
206	24APR85	4.6	7.9	14.0	4.8	.	.	.	.	.
207	25APR85	6.4	5.1	6.4	3.7	.	.	.	.	.
208	26APR85	8.8	6.1	9.0	4.4	1306	1500	1250	.	.
209	27APR85	8.5	8.2	15.3	3.9	.	.	.	.	.
210	28APR85	8.8	8.9	15.7	5.0	.	.	.	.	.
211	29APR85	9.1	8.2	12.9	5.6	.	.	.	.	.
212	30APR85	9.9	8.8	15.7	5.3	.	.	.	.	.
213	01MAY85	11.0	8.8	15.5	5.4	.	.	.	.	.
214	02MAY85	13.0	9.0	15.1	5.6	.	.	.	.	.
215	03MAY85	13.0	8.9	13.7	6.0	.	.	.	.	.
216	04MAY85	13.0	8.0	10.5	6.5	.	.	.	.	.
217	05MAY85	13.0	9.0	14.6	5.9	.	.	.	.	.
218	06MAY85	13.0	8.3	12.9	6.2	1441	1450	1430	.	.
219	07MAY85	15.0	10.4	14.2	5.6	1440	1450	1350	.	.
220	08MAY85	15.0	8.7	14.4	5.4	1420	1443	1393	.	.
221	09MAY85	14.0	7.9	11.4	5.7	1398	1415	1375	.	.
222	10MAY85	14.0	8.1	13.2	5.6	1417	1428	1388	.	.
223	11MAY85	14.0	7.4	11.8	4.9	1412	1430	1390	.	.
224	12MAY85	14.0	7.2	10.1	5.1	1431	1443	1423	.	.
225	13MAY85	13.0	6.9	11.0	4.4	1451	1465	1435	.	.
226	14MAY85	12.0	8.3	15.0	4.2	1462	1478	1438	.	.
227	15MAY85	12.0	9.3	16.2	5.2	1460	1490	1430	.	.
228	16MAY85	11.0	8.4	12.6	5.8	1454	1483	1403	.	.
229	17MAY85	10.0	9.4	16.7	5.7	1449	1465	1415	.	.
230	18MAY85	9.6	9.2	16.4	5.8	1452	1468	1418	.	.
231	19MAY85	9.2	9.1	14.6	5.9	1458	1480	1440	.	.
232	20MAY85	8.4	8.6	13.4	5.6	1468	1493	1433	.	.
233	21MAY85	7.8	8.2	14.1	6.2	1466	1505	1405	.	.
234	22MAY85	7.4	9.9	17.4	5.5	1478	1518	1448	.	.
235	23MAY85	7.0	10.2	17.9	5.7	1484	1530	1450	.	.
236	24MAY85	6.5	9.7	15.5	5.9	1478	1510	1450	.	.
237	25MAY85	6.0	9.6	14.2	6.3	1463	1478	1448	.	.
238	26MAY85	6.2	9.4	14.9	5.9	1451	1475	1435	.	.
239	27MAY85	6.0	10.2	17.9	5.4	1442	1463	1423	.	.
240	28MAY85	5.8	10.1	17.6	5.6	1440	1450	1430	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=B-CORRAL GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
241	29MAY85	5.6	10.4	17.6	6.1	1449.0	1458	1438	.	.
242	30MAY85	5.4	9.2	16.7	4.9	1456.0	1465	1435	.	.
243	31MAY85	5.2	8.1	13.9	4.5	1450.0	1473	1393	.	.
244	01JUN85	5.0	9.8	17.8	5.9	1464.0	1480	1450	.	.
245	02JUN85	4.9	10.7	18.6	5.3	1471.0	1488	1458	.	.
246	03JUN85	4.7	10.0	16.7	5.5	1480.0	1495	1465	.	.
247	04JUN85	4.6	10.3	18.3	5.6	1483.0	1503	1463	.	.
248	05JUN85	4.5	11.6	19.9	6.1	1490.0	1510	1470	.	.
249	06JUN85	4.4	11.2	18.6	6.6	1497.0	1518	1478	.	.
250	07JUN85	4.3	13.1	21.6	7.2	1505.0	1525	1485	.	.
251	08JUN85	4.2	12.9	22.0	7.4	1514.0	1533	1493	.	.
252	09JUN85	4.1	12.5	21.6	7.4	1520.0	1540	1500	.	.
253	10JUN85	4.0	12.2	21.1	6.7	1526.0	1548	1508	.	.
254	11JUN85	3.8	11.2	20.3	5.0	1536.0	1555	1515	.	.
255	12JUN85	3.6	11.9	21.0	5.5	1544.0	1583	1523	.	.
256	13JUN85	3.5	12.4	21.2	6.4	1541.0	1560	1520	.	.
257	14JUN85	3.3	12.8	21.7	7.5	1538.0	1560	1510	.	.
258	15JUN85	3.2	12.8	22.1	6.4	1529.0	1550	1510	.	.
259	16JUN85	3.0	11.5	19.8	7.1	1526.0	1540	1500	.	.
260	17JUN85	2.9	12.8	21.9	6.8	1524.0	1550	1500	.	.
261	18JUN85	2.7	12.3	21.8	6.1	1531.0	1550	1510	.	.
262	19JUN85	2.5	12.5	21.9	5.9	1526.0	1550	1500	.	.
263	20JUN85	2.5	12.3	21.6	6.9	1521.0	1540	1500	.	.
264	21JUN85	2.4	13.0	22.0	7.5	1519.0	1535	1505	.	.
265	22JUN85	2.4	12.2	21.5	5.8	1534.0	1550	1520	.	.
266	23JUN85	2.3	12.4	19.7	7.0	1546.0	1565	1525	.	.
267	24JUN85	2.4	11.7	19.6	8.0	1545.0	1570	1490	.	.
268	25JUN85	2.4	9.7	17.6	6.3	1520.0	1555	1445	.	.
269	26JUN85	2.3	8.7	13.1	5.5	1546.0	1560	1530	.	.
270	27JUN85	2.2	11.3	20.8	4.7	1549.0	1575	1525	.	.
271	28JUN85	2.2	12.3	21.3	5.9	1534.0	1570	1510	.	.
272	29JUN85	2.1	11.4	18.1	6.6	1524.0	1555	1495	.	.
273	30JUN85	2.1	13.0	22.4	6.7	1517.0	1550	1490	.	.
274	01JUL85	2.1	12.9	21.7	6.9	1493.0	1535	1445	.	.
275	02JUL85	2.0	13.0	22.7	7.3	1501.1	1530	1470	.	.
276	03JUL85	2.0	13.5	23.0	7.2	1541.0	1585	1515	.	.
277	04JUL85	2.0	13.1	21.2	7.3	1592.0	1620	1560	.	.
278	05JUL85	2.0	13.6	22.9	7.5	1604.0	1625	1575	.	.
279	06JUL85	1.9	13.4	23.6	7.6	1609.0	1630	1580	.	.
280	07JUL85	1.9	13.1	21.2	8.0	1603.0	1635	1575	.	.
281	08JUL85	1.9	14.0	23.4	8.2	1617.0	1640	1600	.	.
282	09JUL85	2.0	14.0	23.8	8.3	1616.0	1635	1595	.	.
283	10JUL85	2.0	16.3	21.2	10.8	1602.0	1630	1570	.	.
284	11JUL85	2.0	13.7	23.2	8.8	1586.0	1610	1560	.	.
285	12JUL85	2.0	13.4	20.6	9.2	1570.0	1590	1530	.	.
286	13JUL85	1.9	13.6	21.8	8.5	1553.0	1570	1530	.	.
287	14JUL85	1.8	13.5	22.7	7.9	1539.0	1560	1520	.	.
288	15JUL85	1.5	13.2	22.2	8.4	1528.0	1540	1510	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=B-CORRAL GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
289	16JUL85	2.00	12.5	23.2	7.8	1534	1630	1420	.	.
290	17JUL85	1.90	13.1	19.2	9.8	1573	1600	1550	.	.
291	18JUL85	1.80	13.5	21.7	9.7	1574	1590	1560	.	.
292	19JUL85	2.70	12.2	19.8	8.4	1498	1600	170	.	.
293	20JUL85	1.70	12.3	17.2	9.1	.	.	.	.	.
294	21JUL85	1.60	11.6	20.2	9.3	.	.	.	.	.
295	22JUL85	1.60	12.3	20.9	9.4	.	.	.	.	.
296	23JUL85	1.70	13.2	22.6	8.5	.	.	.	.	.
297	24JUL85	1.50	12.2	19.6	8.7	.	.	.	.	.
298	25JUL85	1.50	13.9	23.6	7.7	1603	1610	1590	.	.
299	26JUL85	1.50	12.1	22.3	8.3	1612	1631	1511	.	.
300	27JUL85	1.40	12.8	22.9	7.3	1623	1642	1612	.	.
301	28JUL85	1.50	11.7	19.8	7.7	1584	1643	1423	.	.
302	29JUL85	1.60	11.4	19.0	8.6	1577	1634	924	.	.
303	30JUL85	1.40	12.5	22.4	7.4	1617	1635	1605	.	.
304	31JUL85	1.30	13.5	22.8	7.8	1624	1636	1616	.	.
305	01AUG85	1.20	13.7	23.0	7.8	1631	1647	1617	.	.
306	02AUG85	1.20	13.2	21.5	8.8	1636	1648	1618	.	.
307	03AUG85	1.10	12.9	22.2	7.3	1649	1659	1629	.	.
308	04AUG85	1.00	12.7	22.5	6.5	1660	1670	1650	.	.
309	05AUG85	1.00	12.4	21.7	7.8	1667	1681	1641	.	.
310	06AUG85	1.00	13.3	22.6	7.4	1676	1692	1662	.	.
311	07AUG85	1.00	12.9	22.5	7.2	1688	1703	1673	.	.
312	08AUG85	1.00	12.7	22.0	6.9	1695	1714	1684	.	.
313	09AUG85	1.20	12.3	21.3	6.5	1687	1705	1665	.	.
314	10AUG85	1.20	11.7	21.6	4.9	1660	1696	1636	.	.
315	11AUG85	1.20	11.8	20.4	7.8	1644	1667	1597	.	.
316	12AUG85	1.20	10.9	20.5	4.7	1619	1648	1588	.	.
317	13AUG85	1.20	11.2	21.0	5.1	1638	1669	1599	.	.
318	14AUG85	1.20	11.7	21.4	5.8	1628	1650	1620	.	.
319	15AUG85	1.20	11.3	21.1	5.5	1624	1642	1562	.	.
320	16AUG85	1.10	11.1	18.7	6.2	1609	1643	1553	.	.
321	17AUG85	1.10	12.2	21.7	6.1	1560	1625	1495	.	.
322	18AUG85	1.10	12.7	21.0	8.5	.	.	.	.	.
323	19AUG85	1.00	12.0	19.5	7.7	.	.	.	.	.
324	20AUG85	1.00	12.6	22.2	6.5	.	.	.	.	.
325	21AUG85	1.00	12.1	18.3	9.2	.	.	.	.	.
326	22AUG85	1.10	13.1	22.2	7.5	.	.	.	.	.
327	23AUG85	1.10	11.6	21.8	5.8	.	.	.	.	.
328	24AUG85	1.00	11.3	21.9	4.8	.	.	.	.	.
329	25AUG85	1.00	11.8	21.9	5.7	.	.	.	.	.
330	26AUG85	0.93	11.6	21.3	6.5	.	.	.	.	.
331	27AUG85	0.93	11.8	18.5	8.2	.	.	.	.	.
332	28AUG85	0.86	12.6	22.2	8.3	.	.	.	.	.
333	29AUG85	0.86	12.4	20.4	7.5	.	.	.	.	.
334	30AUG85	0.86	12.0	21.0	6.9	.	.	.	.	.
335	31AUG85	0.86	12.6	20.8	8.0	.	.	.	.	.
336	01SEP85	0.86	13.3	20.9	8.8	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=B-CORRAL GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
337	02SEP85	0.93	12.4	21.4	7.6	.	.	.	.	.
338	03SEP85	1.20	11.5	20.2	6.9	1313	1580	960	.	.
339	04SEP85	1.20	12.0	21.4	7.2	1600	1700	1530	.	.
340	05SEP85	1.20	10.8	20.0	5.8	1605	1620	1590	.	.
341	06SEP85	1.20	10.1	19.3	4.9	1580	1610	1510	.	.
342	07SEP85	1.20	8.3	15.4	5.4	1578	1610	1550	.	.
343	08SEP85	1.10	10.5	19.8	5.0	1551	1570	1530	.	.
344	09SEP85	1.00	10.4	19.0	5.4	.	.	.	.	.
345	10SEP85	1.10	7.9	12.9	4.7	.	.	.	.	.
346	11SEP85	1.20	8.1	13.6	5.4	.	.	.	.	.
347	12SEP85	1.10	7.8	15.7	3.9	.	.	.	.	.
348	13SEP85	1.10	8.9	18.3	3.3	.	.	.	.	.
349	14SEP85	1.10	10.0	19.0	4.2	.	.	.	.	.
350	15SEP85	1.10	10.6	19.3	6.6	.	.	.	.	.
351	16SEP85	1.20	10.3	18.4	5.7	.	.	.	.	.
352	17SEP85	1.20	9.7	17.9	5.5	.	.	.	.	.
353	18SEP85	1.10	8.8	13.8	5.8	.	.	.	.	.
354	19SEP85	1.10	8.8	17.2	5.0	.	.	.	.	.
355	20SEP85	1.10	8.0	14.7	3.7	.	.	.	.	.
356	21SEP85	1.10	8.0	14.6	3.8	.	.	.	.	.
357	22SEP85	1.10	7.2	12.4	4.1	.	.	.	.	.
358	23SEP85	1.10	6.5	14.4	1.6	.	.	.	.	.
359	24SEP85	1.10	7.1	13.4	4.3	.	.	.	.	.
360	25SEP85	1.10	6.8	15.2	2.4	.	.	.	.	.
361	26SEP85	1.10	7.1	16.3	2.1	.	.	.	.	.
362	27SEP85	1.10	7.4	16.2	2.8	.	.	.	.	.
363	28SEP85	1.10	6.7	13.4	1.8	.	.	.	.	.
364	29SEP85	1.00	4.4	12.8	0.2	.	.	.	.	.
365	30SEP85	1.00	4.7	13.7	3.1	.	.	.	.	.

STAT=C-BOX ELDER GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
366	01OCT84	0	.	.	.	.	.	.	.	.
367	02OCT84	0	.	.	.	.	.	.	.	.
368	03OCT84	0	.	.	.	.	.	.	.	.
369	04OCT84	0	.	.	.	.	.	.	.	.
370	05OCT84	0	.	.	.	.	.	.	.	.
371	06OCT84	0	.	.	.	.	.	.	.	.
372	07OCT84	0	.	.	.	.	.	.	.	.
373	08OCT84	0	.	.	.	.	.	.	.	.
374	09OCT84	0	.	.	.	.	.	.	.	.
375	10OCT84	0	.	.	.	.	.	.	.	.
376	11OCT84	0	.	.	.	.	.	.	.	.
377	12OCT84	0	.	.	.	.	.	.	.	.
378	13OCT84	0	.	.	.	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=C-BOX ELDER GULCH -- WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
379	14OCT84	0	.	.	.	.	.	.	.	.
380	15OCT84	0	.	.	.	.	.	.	.	.
381	16OCT84	0	.	.	.	.	.	.	.	.
382	17OCT84	0	.	.	.	.	.	.	.	.
383	18OCT84	0	.	.	.	.	.	.	.	.
384	19OCT84	0	.	.	.	.	.	.	.	.
385	20OCT84	0	.	.	.	.	.	.	.	.
386	21OCT84	0	.	.	.	.	.	.	.	.
387	22OCT84	0	.	.	.	.	.	.	.	.
388	23OCT84	0	.	.	.	.	.	.	.	.
389	24OCT84	0	.	.	.	.	.	.	.	.
390	25OCT84	0	.	.	.	.	.	.	.	.
391	26OCT84	0	.	.	.	.	.	.	.	.
392	27OCT84	0	.	.	.	.	.	.	.	.
393	28OCT84	0	.	.	.	.	.	.	.	.
394	29OCT84	0	.	.	.	.	.	.	.	.
395	30OCT84	0	.	.	.	.	.	.	.	.
396	31OCT84	0	.	.	.	.	.	.	.	.
397	01NOV84	0	.	.	.	.	.	.	.	.
398	02NOV84	0	.	.	.	.	.	.	.	.
399	03NOV84	0	.	.	.	.	.	.	.	.
400	04NOV84	0	.	.	.	.	.	.	.	.
401	05NOV84	0	.	.	.	.	.	.	.	.
402	06NOV84	0	.	.	.	.	.	.	.	.
403	07NOV84	0	.	.	.	.	.	.	.	.
404	08NOV84	0	.	.	.	.	.	.	.	.
405	09NOV84	0	.	.	.	.	.	.	.	.
406	10NOV84	0	.	.	.	.	.	.	.	.
407	11NOV84	0	.	.	.	.	.	.	.	.
408	12NOV84	0	.	.	.	.	.	.	.	.
409	13NOV84	0	.	.	.	.	.	.	.	.
410	14NOV84	0	.	.	.	.	.	.	.	.
411	15NOV84	0	.	.	.	.	.	.	.	.
412	16NOV84	0	.	.	.	.	.	.	.	.
413	17NOV84	0	.	.	.	.	.	.	.	.
414	18NOV84	0	.	.	.	.	.	.	.	.
415	19NOV84	0	.	.	.	.	.	.	.	.
416	20NOV84	0	.	.	.	.	.	.	.	.
417	21NOV84	0	.	.	.	.	.	.	.	.
418	22NOV84	0	.	.	.	.	.	.	.	.
419	23NOV84	0	.	.	.	.	.	.	.	.
420	24NOV84	0	.	.	.	.	.	.	.	.
421	25NOV84	0	.	.	.	.	.	.	.	.
422	26NOV84	0	.	.	.	.	.	.	.	.
423	27NOV84	0	.	.	.	.	.	.	.	.
424	28NOV84	0	.	.	.	.	.	.	.	.
425	29NOV84	0	.	.	.	.	.	.	.	.
426	30NOV84	0	.	.	.	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=C-BOX ELDER GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
427	01DEC84	0	.	.	.	.	.	.	.	.
428	02DEC84	0	.	.	.	.	.	.	.	.
429	03DEC84	0	.	.	.	.	.	.	.	.
430	04DEC84	0	.	.	.	.	.	.	.	.
431	05DEC84	0	.	.	.	.	.	.	.	.
432	06DEC84	0	.	.	.	.	.	.	.	.
433	07DEC84	0	.	.	.	.	.	.	.	.
434	08DEC84	0	.	.	.	.	.	.	.	.
435	09DEC84	0	.	.	.	.	.	.	.	.
436	10DEC84	0	.	.	.	.	.	.	.	.
437	11DEC84	0	.	.	.	.	.	.	.	.
438	12DEC84	0	.	.	.	.	.	.	.	.
439	13DEC84	0	.	.	.	.	.	.	.	.
440	14DEC84	0	.	.	.	.	.	.	.	.
441	15DEC84	0	.	.	.	.	.	.	.	.
442	16DEC84	0	.	.	.	.	.	.	.	.
443	17DEC84	0	.	.	.	.	.	.	.	.
444	18DEC84	0	.	.	.	.	.	.	.	.
445	19DEC84	0	.	.	.	.	.	.	.	.
446	20DEC84	0	.	.	.	.	.	.	.	.
447	21DEC84	0	.	.	.	.	.	.	.	.
448	22DEC84	0	.	.	.	.	.	.	.	.
449	23DEC84	0	.	.	.	.	.	.	.	.
450	24DEC84	0	.	.	.	.	.	.	.	.
451	25DEC84	0	.	.	.	.	.	.	.	.
452	26DEC84	0	.	.	.	.	.	.	.	.
453	27DEC84	0	.	.	.	.	.	.	.	.
454	28DEC84	0	.	.	.	.	.	.	.	.
455	29DEC84	0	.	.	.	.	.	.	.	.
456	30DEC84	0	.	.	.	.	.	.	.	.
457	31DEC84	0	.	.	.	.	.	.	.	.
458	01JAN85	0	.	.	.	.	.	.	.	.
459	02JAN85	0	.	.	.	.	.	.	.	.
460	03JAN85	0	.	.	.	.	.	.	.	.
461	04JAN85	0	.	.	.	.	.	.	.	.
462	05JAN85	0	.	.	.	.	.	.	.	.
463	06JAN85	0	.	.	.	.	.	.	.	.
464	07JAN85	0	.	.	.	.	.	.	.	.
465	08JAN85	0	.	.	.	.	.	.	.	.
466	09JAN85	0	.	.	.	.	.	.	.	.
467	10JAN85	0	.	.	.	.	.	.	.	.
468	11JAN85	0	.	.	.	.	.	.	.	.
469	12JAN85	0	.	.	.	.	.	.	.	.
470	13JAN85	0	.	.	.	.	.	.	.	.
471	14JAN85	0	.	.	.	.	.	.	.	.
472	15JAN85	0	.	.	.	.	.	.	.	.
473	16JAN85	0	.	.	.	.	.	.	.	.
474	17JAN85	0	.	.	.	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=C-BOX ELDER GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
475	18JAN85	0.00	.	.	.	.	.	.	.	.
476	19JAN85	0.00	.	.	.	.	.	.	.	.
477	20JAN85	0.00	.	.	.	.	.	.	.	.
478	21JAN85	0.00	.	.	.	.	.	.	.	.
479	22JAN85	0.00	.	.	.	.	.	.	.	.
480	23JAN85	0.00	.	.	.	.	.	.	.	.
481	24JAN85	0.00	.	.	.	.	.	.	.	.
482	25JAN85	0.00	.	.	.	.	.	.	.	.
483	26JAN85	0.00	.	.	.	.	.	.	.	.
484	27JAN85	0.00	.	.	.	.	.	.	.	.
485	28JAN85	0.00	.	.	.	.	.	.	.	.
486	29JAN85	0.00	.	.	.	.	.	.	.	.
487	30JAN85	0.00	.	.	.	.	.	.	.	.
488	31JAN85	0.00	.	.	.	.	.	.	.	.
489	01FEB85	0.00	.	.	.	.	.	.	.	.
490	02FEB85	0.00	.	.	.	.	.	.	.	.
491	03FEB85	0.00	.	.	.	.	.	.	.	.
492	04FEB85	0.00	.	.	.	.	.	.	.	.
493	05FEB85	0.00	.	.	.	.	.	.	.	.
494	06FEB85	0.00	.	.	.	.	.	.	.	.
495	07FEB85	0.00	.	.	.	.	.	.	.	.
496	08FEB85	0.00	.	.	.	.	.	.	.	.
497	09FEB85	0.00	.	.	.	.	.	.	.	.
498	10FEB85	0.00	.	.	.	.	.	.	.	.
499	11FEB85	0.00	.	.	.	.	.	.	.	.
500	12FEB85	0.00	.	.	.	.	.	.	.	.
501	13FEB85	0.00	.	.	.	.	.	.	.	.
502	14FEB85	0.00	.	.	.	.	.	.	.	.
503	15FEB85	0.00	.	.	.	.	.	.	.	.
504	16FEB85	0.00	.	.	.	.	.	.	.	.
505	17FEB85	0.00	.	.	.	.	.	.	.	.
506	18FEB85	0.00	.	.	.	.	.	.	.	.
507	19FEB85	0.00	.	.	.	.	.	.	.	.
508	20FEB85	0.00	.	.	.	.	.	.	.	.
509	21FEB85	0.02	0	0	0	628	810	400	.	.
510	22FEB85	0.02	.	.	.	.	.	.	.	.
511	23FEB85	0.00	.	.	.	.	.	.	.	.
512	24FEB85	0.00	.	.	.	.	.	.	.	.
513	25FEB85	0.00	.	.	.	.	.	.	.	.
514	26FEB85	0.00	.	.	.	.	.	.	.	.
515	27FEB85	0.00	.	.	.	.	.	.	.	.
516	28FEB85	0.00	.	.	.	.	.	.	.	.
517	.	0.00	.	.	.	.	.	.	.	.
518	01MAR85	0.02	.	.	.	.	.	.	.	.
519	02MAR85	0.10	.	.	.	.	.	.	.	.
520	03MAR85	0.05	.	.	.	.	.	.	.	.
521	04MAR85	0.04	.	.	.	.	.	.	.	.
522	05MAR85	0.02	.	.	.	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=C-BOX ELDER GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
523	06MAR85	0.00	.	.	.	.	.	.	.	.
524	07MAR85	0.05	.	.	.	.	.	.	.	.
525	08MAR85	0.03	.	.	.	.	.	.	.	.
526	09MAR85	0.13	.	.	.	.	.	.	.	.
527	10MAR85	0.01	.	.	.	.	.	.	.	.
528	11MAR85	0.48	0.0	0.1	0.0	.	.	.	.	.
529	12MAR85	0.12	0.0	0.1	0.0	.	.	.	.	.
530	13MAR85	0.02	0.0	0.1	0.0	.	.	.	.	.
531	14MAR85	0.02	0.0	0.1	0.0	.	.	.	.	.
532	15MAR85	0.01	0.0	0.1	0.0	.	.	.	.	.
533	16MAR85	0.00	0.0	0.4	0.0	.	.	.	.	.
534	17MAR85	0.00	0.0	0.1	0.0	.	.	.	.	.
535	18MAR85	0.01	0.0	0.9	0.0	.	.	.	.	.
536	19MAR85	0.50	0.3	3.0	0.0	.	.	.	.	.
537	20MAR85	0.40	1.1	7.9	0.0	.	.	.	.	.
538	21MAR85	0.34	1.3	8.4	0.0	.	.	.	.	.
539	22MAR85	0.28	0.0	0.1	0.0	.	.	.	.	.
540	23MAR85	0.25	0.2	3.4	0.0	.	.	.	.	.
541	24MAR85	0.70	1.0	7.4	0.0	.	.	.	.	.
542	25MAR85	1.00	2.9	11.1	0.0	.	.	.	.	.
543	26MAR85	0.92	0.0	1.0	0.0	.	.	.	.	.
544	27MAR85	0.89	0.0	0.1	0.0	.	.	.	.	.
545	28MAR85	0.87	0.0	0.1	0.0	.	.	.	.	.
546	29MAR85	0.85	0.0	0.1	0.0	.	.	.	.	.
547	30MAR85	0.84	0.0	0.1	0.0	.	.	.	.	.
548	31MAR85	0.80	0.0	0.1	0.0	.	.	.	.	.
549	01APR85	1.50	0.0	0.1	0.0	.	.	.	.	.
550	02APR85	2.50	0.8	4.6	0.0	.	.	.	.	.
551	03APR85	3.50	3.7	12.0	0.4	.	.	.	.	.
552	04APR85	4.00	3.2	6.1	1.0	.	.	.	.	.
553	05APR85	4.50	4.4	12.0	0.1	.	.	.	.	.
554	06APR85	5.00	5.6	13.1	2.0	.	.	.	.	.
555	07APR85	5.30	5.6	13.1	1.1	.	.	.	.	.
556	08APR85	5.70	5.8	12.1	2.0	.	.	.	.	.
557	09APR85	6.10	6.5	13.4	3.4	.	.	.	.	.
558	10APR85	8.20	6.3	14.0	2.5	.	.	.	.	.
559	11APR85	9.00	6.0	12.1	2.0	.	.	.	.	.
560	12APR85	9.70	6.2	12.5	2.1	.	.	.	.	.
561	13APR85	10.00	6.0	12.6	2.0	.	.	.	.	.
562	14APR85	11.00	6.4	14.1	2.0	.	.	.	.	.
563	15APR85	11.00	6.5	14.0	2.0	.	.	.	.	.
564	16APR85	11.00	6.9	12.9	4.0	.	.	.	.	.
565	17APR85	12.00	7.1	12.9	4.1	.	.	.	.	.
566	18APR85	12.00	6.3	10.1	4.5	.	.	.	.	.
567	19APR85	13.00	4.5	7.1	2.5	.	.	.	.	.
568	20APR85	14.00	4.3	7.9	2.0	.	.	.	.	.
569	21APR85	15.00	4.8	9.1	2.1	.	.	.	.	.
570	22APR85	15.00	3.7	5.9	2.0	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=C-BOX ELDER GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
571	23APR85	15.0	5.5	12.0	2.0	.	.	.	.	.
572	24APR85	16.0	6.4	12.1	2.4	.	.	.	.	.
573	25APR85	17.0	3.3	5.0	2.0	.	.	.	.	.
574	26APR85	18.0	4.7	7.6	2.1	.	.	.	.	.
575	27APR85	19.0	6.1	12.9	2.0	.	.	.	.	.
576	28APR85	19.0	7.3	12.9	4.0	.	.	.	.	.
577	29APR85	20.0	6.6	10.5	4.0	.	.	.	.	.
578	30APR85	22.0	7.1	12.5	4.0	.	.	.	.	.
579	01MAY85	23.0	7.2	12.4	4.5	.	.	.	.	.
580	02MAY85	24.0	7.4	12.9	4.9	.	.	.	.	.
581	03MAY85	26.0	7.2	10.9	5.0	.	.	.	.	.
582	04MAY85	26.0	6.4	9.4	5.0	.	.	.	.	.
583	05MAY85	26.0	7.4	12.6	5.0	.	.	.	.	.
584	06MAY85	24.0	6.9	10.6	5.0	.	.	.	.	.
585	07MAY85	23.0	7.5	12.6	5.0	.	.	.	.	.
586	08MAY85	23.0	7.4	12.6	5.0	.	.	.	.	.
587	09MAY85	22.0	6.9	10.0	5.0	.	.	.	.	.
588	10MAY85	21.0	7.2	10.9	5.0	.	.	.	.	.
589	11MAY85	19.0	6.6	10.9	4.6	.	.	.	.	.
590	12MAY85	18.0	6.1	9.1	4.6	.	.	.	.	.
591	13MAY85	17.0	6.1	10.0	2.6	.	.	.	.	.
592	14MAY85	16.0	6.9	12.6	2.6	.	.	.	.	.
593	15MAY85	16.0	8.6	15.1	4.6	.	.	.	.	.
594	16MAY85	15.0	7.8	12.6	5.0	.	.	.	.	.
595	17MAY85	15.0	8.5	14.4	5.1	.	.	.	.	.
596	18MAY85	14.0	8.0	14.1	5.1	.	.	.	.	.
597	19MAY85	14.0	8.0	14.4	5.1	.	.	.	.	.
598	20MAY85	13.0	7.8	10.6	5.1	.	.	.	.	.
599	21MAY85	12.0	7.0	12.2	5.0	.	.	.	.	.
600	22MAY85	12.0	9.2	15.9	5.0	.	.	.	.	.
601	23MAY85	11.0	9.1	16.0	5.0	.	.	.	.	.
602	24MAY85	11.0	8.7	14.1	5.1	1124	1180	1080	.	.
603	25MAY85	9.8	8.7	12.4	5.0	1111	1180	1080	.	.
604	26MAY85	9.3	8.2	12.6	5.0	1098	1130	1020	.	.
605	27MAY85	9.5	9.2	17.2	5.0	1091	1130	1020	.	.
606	28MAY85	8.8	9.2	15.9	5.0	1085	1130	1010	.	.
607	29MAY85	8.2	9.5	15.6	5.0	1068	1130	1010	.	.
608	30MAY85	7.4	8.7	15.6	5.0	1029	1120	1000	.	.
609	31MAY85	7.1	7.6	12.6	4.1	1025	1090	1000	.	.
610	01JUN85	6.6	9.0	15.6	5.0	1024	1190	1000	.	.
611	02JUN85	6.0	10.2	17.6	5.0	1063	1190	1000	.	.
612	03JUN85	5.4	9.5	14.3	7.5	1068	1190	1000	.	.
613	04JUN85	4.8	8.9	13.5	5.4	1043	1190	1000	.	.
614	05JUN85	4.6	.	.	.	.	.	.	.	.
615	06JUN85	4.2	.	.	.	.	.	.	.	.
616	07JUN85	3.7	.	.	.	.	.	.	.	.
617	08JUN85	3.4	.	.	.	.	.	.	.	.
618	09JUN85	3.0	.	.	.	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=C-BOX ELDER GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
619	10JUN85	2.70	.	.	.	.	.	.	.	.
620	11JUN85	2.70	.	.	.	.	.	.	.	.
621	12JUN85	2.30	.	.	.	.	.	.	.	.
622	13JUN85	2.00	.	.	.	.	.	.	.	.
623	14JUN85	2.10	.	.	.	.	.	.	.	.
624	15JUN85	1.70	.	.	.	.	.	.	.	.
625	16JUN85	1.50	.	.	.	.	.	.	.	.
626	17JUN85	1.30	.	.	.	.	.	.	.	.
627	18JUN85	1.10	.	.	.	.	.	.	.	.
628	19JUN85	0.99	.	.	.	.	.	.	.	.
629	20JUN85	0.70	.	.	.	.	.	.	.	.
630	21JUN85	0.57	.	.	.	.	.	.	.	.
631	22JUN85	0.51	.	.	.	.	.	.	.	.
632	23JUN85	0.44	.	.	.	.	.	.	.	.
633	24JUN85	0.46	.	.	.	.	.	.	.	.
634	25JUN85	0.85	.	.	.	.	.	.	.	.
635	26JUN85	0.79	.	.	.	.	.	.	.	.
636	27JUN85	0.57	.	.	.	.	.	.	.	.
637	28JUN85	0.44	.	.	.	.	.	.	.	.
638	29JUN85	0.36	.	.	.	.	.	.	.	.
639	30JUN85	0.33	.	.	.	.	.	.	.	.
640	01JUL85	0.33	.	.	.	.	.	.	.	.
641	02JUL85	0.30	.	.	.	.	.	.	.	.
642	03JUL85	0.21	.	.	.	.	.	.	.	.
643	04JUL85	0.19	.	.	.	.	.	.	.	.
644	05JUL85	0.15	.	.	.	.	.	.	.	.
645	06JUL85	0.11	.	.	.	.	.	.	.	.
646	07JUL85	0.11	.	.	.	.	.	.	.	.
647	08JUL85	0.08	.	.	.	.	.	.	.	.
648	09JUL85	0.06	.	.	.	.	.	.	.	.
649	10JUL85	0.06	.	.	.	.	.	.	.	.
650	11JUL85	0.05	.	.	.	.	.	.	.	.
651	12JUL85	0.04	.	.	.	.	.	.	.	.
652	13JUL85	0.03	.	.	.	.	.	.	.	.
653	14JUL85	0.02	.	.	.	.	.	.	.	.
654	15JUL85	0.02	.	.	.	.	.	.	.	.
655	16JUL85	0.02	.	.	.	.	.	.	.	.
656	17JUL85	0.00	.	.	.	.	.	.	.	.
657	18JUL85	0.00	.	.	.	.	.	.	.	.
658	19JUL85	0.00	.	.	.	.	.	.	.	.
659	20JUL85	0.00	.	.	.	.	.	.	.	.
660	21JUL85	0.00	.	.	.	.	.	.	.	.
661	22JUL85	0.00	.	.	.	.	.	.	.	.
662	23JUL85	0.00	.	.	.	.	.	.	.	.
663	24JUL85	0.00	.	.	.	.	.	.	.	.
664	25JUL85	0.00	.	.	.	.	.	.	.	.
665	26JUL85	0.00	.	.	.	.	.	.	.	.
666	27JUL85	0.00	.	.	.	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=C-BOX ELDER GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
667	28JUL85	0	.	.	.	.	.	.	.	.
668	29JUL85	0	.	.	.	.	.	.	.	.
669	30JUL85	0	.	.	.	.	.	.	.	.
670	31JUL85	0	.	.	.	.	.	.	.	.
671	01AUG85	0	.	.	.	.	.	.	.	.
672	02AUG85	0	.	.	.	.	.	.	.	.
673	03AUG85	0	.	.	.	.	.	.	.	.
674	04AUG85	0	.	.	.	.	.	.	.	.
675	05AUG85	0	.	.	.	.	.	.	.	.
676	06AUG85	0	.	.	.	.	.	.	.	.
677	07AUG85	0	.	.	.	.	.	.	.	.
678	08AUG85	0	.	.	.	.	.	.	.	.
679	09AUG85	0	.	.	.	.	.	.	.	.
680	10AUG85	0	.	.	.	.	.	.	.	.
681	11AUG85	0	.	.	.	.	.	.	.	.
682	12AUG85	0	.	.	.	.	.	.	.	.
683	13AUG85	0	.	.	.	.	.	.	.	.
684	14AUG85	0	.	.	.	.	.	.	.	.
685	15AUG85	0	.	.	.	.	.	.	.	.
686	16AUG85	0	.	.	.	.	.	.	.	.
687	17AUG85	0	.	.	.	.	.	.	.	.
688	18AUG85	0	.	.	.	.	.	.	.	.
689	19AUG85	0	.	.	.	.	.	.	.	.
690	20AUG85	0	.	.	.	.	.	.	.	.
691	21AUG85	0	.	.	.	.	.	.	.	.
692	22AUG85	0	.	.	.	.	.	.	.	.
693	23AUG85	0	.	.	.	.	.	.	.	.
694	24AUG85	0	.	.	.	.	.	.	.	.
695	25AUG85	0	.	.	.	.	.	.	.	.
696	26AUG85	0	.	.	.	.	.	.	.	.
697	27AUG85	0	.	.	.	.	.	.	.	.
698	28AUG85	0	.	.	.	.	.	.	.	.
699	29AUG85	0	.	.	.	.	.	.	.	.
700	30AUG85	0	.	.	.	.	.	.	.	.
701	31AUG85	0	.	.	.	.	.	.	.	.
702	01SEP85	0	.	.	.	.	.	.	.	.
703	02SEP85	0	.	.	.	.	.	.	.	.
704	03SEP85	0	.	.	.	.	.	.	.	.
705	04SEP85	0	.	.	.	.	.	.	.	.
706	05SEP85	0	.	.	.	.	.	.	.	.
707	06SEP85	0	.	.	.	.	.	.	.	.
708	07SEP85	0	.	.	.	.	.	.	.	.
709	08SEP85	0	.	.	.	.	.	.	.	.
710	09SEP85	0	.	.	.	.	.	.	.	.
711	10SEP85	0	.	.	.	.	.	.	.	.
712	11SEP85	0	.	.	.	.	.	.	.	.
713	12SEP85	0	.	.	.	.	.	.	.	.
714	13SEP85	0	.	.	.	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=C-BOX ELDER GULCH - WEST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
715	14SEP85	0	.	.	.	.	.	.	.	.
716	15SEP85	0	.	.	.	.	.	.	.	.
717	16SEP85	0	.	.	.	.	.	.	.	.
718	17SEP85	0	.	.	.	.	.	.	.	.
719	18SEP85	0	.	.	.	.	.	.	.	.
720	19SEP85	0	.	.	.	.	.	.	.	.
721	20SEP85	0	.	.	.	.	.	.	.	.
722	21SEP85	0	.	.	.	.	.	.	.	.
723	22SEP85	0	.	.	.	.	.	.	.	.
724	23SEP85	0	.	.	.	.	.	.	.	.
725	24SEP85	0	.	.	.	.	.	.	.	.
726	25SEP85	0	.	.	.	.	.	.	.	.
727	26SEP85	0	.	.	.	.	.	.	.	.
728	27SEP85	0	.	.	.	.	.	.	.	.
729	28SEP85	0	.	.	.	.	.	.	.	.
730	29SEP85	0	.	.	.	.	.	.	.	.
731	30SEP85	0	.	.	.	.	.	.	.	.

STAT=D-CORRAL GULCH - EAST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
732	010CT84	1.9	10.2	14.1	8.1	1683	1720	1610	.	.
733	020CT84	1.5	11.2	15.5	9.0	.	.	.	.	.
734	030CT84	1.3	10.5	15.2	8.2	1815	1840	1780	.	.
735	040CT84	1.3	10.5	12.7	9.5	1637	1790	1340	.	.
736	050CT84	1.2	11.0	15.7	8.9	1719	1790	1620	.	.
737	060CT84	1.2	10.5	15.6	8.1	1675	1740	1640	.	.
738	070CT84	1.2	10.3	14.7	8.2	1687	1780	1640	.	.
739	080CT84	1.2	10.2	15.2	7.9	1710	1770	1660	.	.
740	090CT84	1.2	10.2	16.1	7.4	1739	1780	1700	.	.
741	100CT84	1.2	10.0	15.3	7.8	1725	1760	1620	.	.
742	110CT84	1.2	10.0	15.5	7.5	1743	1770	1680	.	.
743	120CT84	1.2	9.0	10.0	7.0	1727	1760	1690	.	.
744	130CT84	1.2	9.3	14.1	6.5	1702	1730	1660	.	.
745	140CT84	1.2	9.0	13.4	6.8	.	.	.	.	.
746	150CT84	1.2	7.5	10.1	6.2	.	.	.	.	.
747	160CT84	1.2	7.9	12.1	5.9	.	.	.	.	.
748	170CT84	1.2	7.2	11.6	3.7	.	.	.	.	.
749	180CT84	1.2	7.1	10.7	5.5	.	.	.	.	.
750	190CT84	1.2	7.4	9.6	6.3	.	.	.	.	.
751	200CT84	1.2	7.9	11.1	6.5	.	.	.	.	.
752	210CT84	1.1	7.7	10.0	6.5	.	.	.	.	.
753	220CT84	1.1	7.5	10.9	6.0	1756	1780	1740	.	.
754	230CT84	1.1	7.4	10.0	6.0	1750	1770	1720	.	.
755	240CT84	1.1	7.2	10.5	5.5	1739	1760	1690	.	.
756	250CT84	1.1	7.4	11.2	5.4	1722	1760	1680	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=D-CORRAL GULCH - EAST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
757	26OCT84	1.1	8.1	11.1	6.0	1712	1770	1650	.	.
758	27OCT84	1.1	7.6	11.3	5.3	1717	1760	1600	.	.
759	28OCT84	1.1	7.1	10.8	5.3	1736	1760	1650	.	.
760	29OCT84	1.1	7.6	11.3	5.8	1729	1750	1660	.	.
761	30OCT84	1.1	8.2	12.5	6.3	1737	1760	1680	.	.
762	31OCT84	1.1	7.9	11.1	6.4	1726	1760	1670	.	.
763	01NOV84	1.1	7.3	11.0	5.7	1725	1760	1700	.	.
764	02NOV84	1.1	7.5	11.2	5.5	1738	1760	1710	.	.
765	03NOV84	1.1	7.4	10.7	5.8	1733	1750	1720	.	.
766	04NOV84	1.1	6.9	10.8	5.3	1728	1740	1710	.	.
767	05NOV84	1.1	7.2	10.5	5.5	1722	1740	1700	.	.
768	06NOV84	1.2	7.6	10.8	6.6	1715	1760	1670	.	.
769	07NOV84	1.2	7.5	10.3	6.2	1692	1720	1610	.	.
770	08NOV84	1.2	7.1	10.0	5.6	1670	1700	1590	.	.
771	09NOV84	1.2	6.8	9.2	5.4	1651	1660	1630	.	.
772	10NOV84	1.2	6.6	9.2	5.0	1631	1660	1590	.	.
773	11NOV84	1.2	7.7	9.9	6.0	1629	1680	1580	.	.
774	12NOV84	1.2	7.6	10.6	6.0	1673	1730	1590	.	.
775	13NOV84	1.1	7.8	10.5	6.4	1694	1780	1590	.	.
776	14NOV84	1.0	7.0	8.8	5.8	1690	1730	1650	.	.
777	15NOV84	1.1	6.5	9.6	5.2	1697	1730	1650	.	.
778	16NOV84	1.1	6.6	8.2	5.1	1684	1730	1620	.	.
779	17NOV84	1.1	7.0	10.0	5.9	1630	1660	1610	.	.
780	18NOV84	1.1	6.5	9.0	5.4	1650	1700	1630	.	.
781	19NOV84	1.1	6.4	8.8	5.6	1656	1690	1650	.	.
782	20NOV84	1.1	6.4	8.9	5.3	1655	1670	1620	.	.
783	21NOV84	1.1	6.7	9.2	5.4	1654	1670	1620	.	.
784	22NOV84	1.1	6.8	9.2	5.7	1645	1690	1600	.	.
785	23NOV84	1.1	6.7	9.2	5.6	1656	1680	1600	.	.
786	24NOV84	1.1	7.1	9.5	5.8	1644	1690	1590	.	.
787	25NOV84	1.1	6.9	8.7	5.9	1625	1680	1570	.	.
788	26NOV84	1.2	6.2	7.9	4.7	1656	1690	1590	.	.
789	27NOV84	1.2	5.8	7.8	4.3	1665	1700	1640	.	.
790	28NOV84	1.2	6.5	8.8	5.2	1643	1690	1590	.	.
791	29NOV84	1.2	6.1	8.3	5.2	1662	1700	1640	.	.
792	30NOV84	1.2	6.1	7.7	5.3	1643	1680	1570	.	.
793	01DEC84	1.2	5.8	7.4	4.3	1634	1700	1550	.	.
794	02DEC84	1.2	5.3	7.7	4.1	1619	1680	1570	.	.
795	03DEC84	1.2	6.2	6.7	4.9	1631	1690	1540	.	.
796	04DEC84	1.3	5.2	7.4	4.3	1647	1687	1567	.	.
797	05DEC84	1.2	5.2	7.2	4.3	1615	1663	1543	.	.
798	06DEC84	1.2	5.1	7.5	4.1	1605	1640	1540	.	.
799	07DEC84	1.1	5.7	7.9	4.5	1610	1677	1547	.	.
800	08DEC84	1.1	6.3	7.2	5.1	1661	1683	1593	.	.
801	09DEC84	1.1	6.5	9.0	5.4	1665	1710	1630	.	.
802	10DEC84	1.1	6.6	8.2	5.2	1668	1707	1607	.	.
803	11DEC84	1.1	6.7	8.2	5.6	1662	1703	1633	.	.
804	12DEC84	1.1	6.4	8.6	4.5	1685	1710	1610	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=D-CORRAL GULCH - EAST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
805	13DEC84	1.10	6.0	6.6	5.5	1688	1707	1637	.	.
806	14DEC84	1.10	5.8	7.4	4.8	1673	1703	1623	.	.
807	15DEC84	1.00	6.2	7.8	5.0	1689	1730	1660	.	.
808	16DEC84	1.00	6.4	8.6	5.0	1724	1737	1707	.	.
809	17DEC84	1.00	5.8	7.3	4.6	1725	1743	1683	.	.
810	18DEC84	1.00	6.0	7.6	5.2	1739	1750	1710	.	.
811	19DEC84	1.10	6.5	8.3	5.5	1678	1720	1630	.	.
812	20DEC84	1.10	6.2	8.0	4.3	1633	1650	1570	.	.
813	21DEC84	1.10	5.6	7.6	4.4	1634	1650	1590	.	.
814	22DEC84	1.10	5.4	7.4	4.4	1640	1650	1630	.	.
815	23DEC84	1.10	5.8	7.9	4.7	1634	1640	1620	.	.
816	24DEC84	1.10	5.6	7.4	4.7	1628	1640	1610	.	.
817	25DEC84	1.10	5.7	7.4	4.7	1622	1630	1610	.	.
818	26DEC84	1.10	6.4	8.8	5.1	1615	1620	1600	.	.
819	27DEC84	1.20	7.3	8.6	6.7	1609	1620	1590	.	.
820	28DEC84	1.20	6.9	8.8	6.1	1621	1650	1580	.	.
821	29DEC84	1.10	6.8	8.2	5.7	1581	1620	1510	.	.
822	30DEC84	1.10	6.7	8.0	5.7	1606	1620	1540	.	.
823	31DEC84	1.10	6.2	8.1	5.1	1602	1620	1570	.	.
824	01JAN85	1.10	5.6	7.3	4.7	1599	1630	1570	.	.
825	02JAN85	1.10	5.4	7.2	4.7	1613	1630	1600	.	.
826	03JAN85	1.00	5.5	7.5	4.8	1620	1650	1600	.	.
827	04JAN85	1.00	5.5	7.5	4.7	1637	1760	1580	.	.
828	05JAN85	0.95	5.7	7.7	4.7	1632	1680	1620	.	.
829	06JAN85	0.95	6.2	8.1	5.5	1623	1640	1610	.	.
830	07JAN85	0.95	6.7	8.3	5.9	1627	1640	1610	.	.
831	08JAN85	1.00	6.8	7.6	6.0	1614	1630	1610	.	.
832	09JAN85	1.10	6.4	8.1	5.1	1629	1640	1620	.	.
833	10JAN85	1.10	6.4	8.2	5.1	1625	1630	1610	.	.
834	11JAN85	1.10	6.1	7.6	4.6	1619	1630	1600	.	.
835	12JAN85	0.90	5.4	7.3	4.3	1621	1630	1610	.	.
836	13JAN85	0.90	5.1	6.9	4.3	1615	1630	1600	.	.
837	14JAN85	0.90	5.3	7.3	4.5	1615	1620	1610	.	.
838	15JAN85	0.90	5.5	7.3	4.6	1613	1620	1560	.	.
839	16JAN85	0.84	5.6	7.7	4.8	1615	1620	1600	.	.
840	17JAN85	0.79	5.9	8.0	4.8	1614	1630	1580	.	.
841	18JAN85	0.79	6.3	8.7	5.1	1619	1640	1610	.	.
842	19JAN85	0.79	6.7	8.7	5.6	1613	1630	1600	.	.
843	20JAN85	0.79	6.5	8.1	5.2	1605	1620	1600	.	.
844	21JAN85	0.79	6.4	7.5	5.5	1590	1610	1570	.	.
845	22JAN85	0.79	5.9	8.1	4.7	1594	1600	1590	.	.
846	23JAN85	0.79	5.6	7.5	4.6	1595	1610	1580	.	.
847	24JAN85	0.79	5.6	7.5	4.9	1594	1610	1580	.	.
848	25JAN85	0.75	5.6	7.7	4.7	1591	1600	1580	.	.
849	26JAN85	0.75	6.1	8.0	5.0	1583	1590	1570	.	.
850	27JAN85	0.75	6.4	8.3	5.3	1572	1580	1560	.	.
851	28JAN85	0.75	6.4	8.4	5.1	1569	1580	1550	.	.
852	29JAN85	0.75	6.2	7.9	5.1	1566	1580	1500	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=D--CORRAL GULCH - EAST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
853	30JAN85	0.75	5.6	7.80	4.7	1587	1620	1550	.	.
854	31JAN85	0.75	5.1	6.80	4.4	1602	1620	1550	.	.
855	01FEB85	0.75	4.9	6.60	4.3	1587	1720	1550	.	.
856	02FEB85	0.71	5.6	7.00	4.7	1603	1730	1570	.	.
857	03FEB85	0.79	5.9	7.30	5.1	1606	1630	1590	.	.
858	04FEB85	0.71	5.4	7.30	4.3	1608	1620	1590	.	.
859	05FEB85	0.67	5.6	7.30	4.4	1605	1620	1590	.	.
860	06FEB85	0.67	5.7	7.40	4.6	1570	1620	1520	.	.
861	07FEB85	0.71	5.9	7.70	4.6	1614	1630	1600	.	.
862	08FEB85	0.71	6.4	7.90	5.5	1613	1630	1600	.	.
863	09FEB85	0.75	6.1	8.20	5.5	1604	1620	1580	.	.
864	10FEB85	0.75	5.8	7.30	4.5	1604	1620	1560	.	.
865	11FEB85	0.79	5.9	8.40	4.5	1608	1650	1580	.	.
866	12FEB85	0.84	6.3	8.10	5.1	1604	1630	1590	.	.
867	13FEB85	0.85	6.4	9.20	5.2	1603	1620	1550	.	.
868	14FEB85	0.91	6.4	9.20	5.1	1600	1620	1580	.	.
869	15FEB85	0.91	6.8	9.90	5.4	1600	1620	1590	.	.
870	16FEB85	1.00	6.9	9.70	5.5	1598	1620	1590	.	.
871	17FEB85	1.10	6.9	8.70	5.7	1601	1650	1580	.	.
872	18FEB85	1.10	6.8	9.90	5.5	1600	1640	1570	.	.
873	19FEB85	1.20	6.8	9.90	5.3	1589	1610	1580	.	.
874	20FEB85	1.30	7.5	10.60	6.4	1585	1610	1410	.	.
875	21FEB85	1.30	7.2	10.20	5.7	1527	1670	1010	.	.
876	22FEB85	1.50	6.9	9.30	5.5	1588	1670	1490	.	.
877	23FEB85	1.50	6.8	9.60	5.6	1584	1600	1510	.	.
878	24FEB85	1.60	6.9	10.70	5.4	1590	1680	1520	.	.
879	25FEB85	1.80	7.0	10.40	5.8	1540	1650	1430	.	.
880	26FEB85	1.80	6.9	10.30	5.2	1528	1600	1460	.	.
881	27FEB85	1.90	6.8	10.00	5.3	1508	1720	1440	.	.
882	28FEB85	2.00	6.9	10.50	5.3	1435	1590	1000	.	.
883	01MAR85	2.10	7.1	10.90	5.5	1495	1580	1370	.	.
884	02MAR85	2.20	6.5	9.70	4.3	1343	1530	1040	.	.
885	03MAR85	2.40	5.6	8.40	4.2	1383	1500	1260	.	.
886	04MAR85	2.40	6.5	9.81	5.2	1264	1430	1160	.	.
887	05MAR85	2.40	7.0	10.10	5.4	1160	1320	1050	.	.
888	06MAR85	2.60	6.6	10.70	3.9	1135	1300	970	.	.
889	07MAR85	2.70	6.1	10.50	3.9	1135	1300	990	.	.
890	08MAR85	2.80	6.0	10.30	3.3	1073	1230	880	.	.
891	09MAR85	2.30	5.0	10.80	0.8	858	1220	420	.	.
892	10MAR85	1.30	3.0	4.60	1.2	686	990	430	.	.
893	11MAR85	2.70	4.2	6.00	3.1	965	1170	720	.	.
894	12MAR85	1.80	6.0	6.70	4.7	1204	1300	1060	.	.
895	13MAR85	1.50	7.0	9.90	5.1	1236	1350	1030	.	.
896	14MAR85	1.70	6.5	9.70	3.9	1037	1300	640	.	.
897	15MAR85	2.20	5.4	8.30	1.7	735	860	420	.	.
898	16MAR85	0.94	5.5	8.30	2.3	808	1210	500	.	.
899	17MAR85	1.50	6.2	9.70	3.8	1036	1330	710	.	.
900	18MAR85	0.90	5.8	7.40	4.1	884	1000	780	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=D-CORRAL GULCH - EAST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
901	19MAR85	3.0	5.2	8.6	1.2	810	1050	340	.	.
902	20MAR85	3.7	4.4	6.8	2.0	889	1180	550	.	.
903	21MAR85	4.4	3.5	5.2	1.5	830	1120	500	.	.
904	22MAR85	3.6	7.1	9.7	5.2	1220	1260	1040	.	.
905	23MAR85	3.4	8.4	11.6	6.9	1278	1310	1250	.	.
906	24MAR85	4.9	7.6	13.4	2.5	1109	1340	420	.	.
907	25MAR85	5.2	7.4	13.2	3.7	1028	1350	350	.	.
908	26MAR85	4.8	7.0	9.8	5.0	1001	1060	740	.	.
909	27MAR85	4.6	6.7	7.5	6.3	1066	1090	1050	.	.
910	28MAR85	4.4	7.0	8.4	6.1	1096	1110	1060	.	.
911	29MAR85	4.4	6.3	6.8	6.1	1116	1140	1090	.	.
912	30MAR85	4.3	6.5	7.5	5.8	1147	1160	1100	.	.
913	31MAR85	4.1	6.7	7.6	6.1	1162	1180	1150	.	.
914	01APR85	4.1	7.5	9.6	6.3	1176	1190	1160	.	.
915	02APR85	5.2	7.2	10.2	4.7	1014	1200	290	.	.
916	03APR85	6.7	5.9	7.6	4.5	944	11350	400	.	.
917	04APR85	7.9	.	.	.	.	.	.	.	.
918	05APR85	7.8	.	.	.	.	.	.	.	.
919	06APR85	9.0	.	.	.	.	.	.	.	.
920	07APR85	9.1	.	.	.	.	.	.	.	.
921	08APR85	9.0	.	.	.	.	.	.	.	.
922	09APR85	8.7	.	.	.	.	.	.	.	.
923	10APR85	8.8	.	.	.	.	.	.	.	.
924	11APR85	9.1	11.9	17.0	6.0	1244	1450	1090	.	.
925	12APR85	9.6	9.5	18.1	3.9	1014	1270	820	.	.
926	13APR85	8.9	8.9	17.3	2.8	1278	1320	1060	.	.
927	14APR85	9.7	9.6	19.5	2.9	1287	1320	1240	.	.
928	15APR85	11.0	8.9	16.7	2.9	1298	1340	1260	.	.
929	16APR85	12.0	9.8	18.1	3.2	1306	1380	1220	.	.
930	17APR85	13.0	9.5	16.6	4.1	1270	1360	1140	.	.
931	18APR85	13.0	8.9	16.1	4.5	1270	1310	1200	.	.
932	19APR85	15.0	6.4	11.5	3.1	1266	1310	1200	.	.
933	20APR85	15.0	6.4	13.6	0.4	1181	1300	1090	.	.
934	21APR85	15.0	6.4	13.6	1.2	1282	1370	1030	.	.
935	22APR85	16.0	5.8	6.5	3.6	1451	1530	1330	.	.
936	23APR85	16.0	5.7	6.2	4.9	1548	1570	1530	.	.
937	24APR85	17.0	7.7	14.3	5.9	1483	1590	1350	.	.
938	25APR85	18.0	5.5	7.2	2.8	1400	1530	1260	.	.
939	26APR85	18.0	5.7	9.9	2.3	1293	1390	1250	.	.
940	27APR85	18.0	8.7	20.1	1.5	1295	1420	1220	.	.
941	28APR85	18.0	9.1	18.5	3.4	1343	1470	1270	.	.
942	29APR85	24.0	5.9	7.0	3.9	1462	1620	1310	.	.
943	30APR85	25.0	7.3	9.0	6.9	1592	1620	1550	.	.
944	01MAY85	22.0	9.4	14.6	3.9	1345	1620	1230	.	.
945	02MAY85	29.0	12.0	22.0	4.1	1306	1460	1180	.	.
946	03MAY85	28.0	8.4	16.2	4.6	1430	1560	1260	.	.
947	04MAY85	28.0	8.4	13.1	5.5	1296	1460	1080	.	.
948	05MAY85	28.0	10.5	18.1	5.0	1226	1430	900	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=D-CORRAL GULCH - EAST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
949	06MAY85	32.0	9.1	14.2	5.8	1302	1480	1240	.	.
950	07MAY85	33.0	10.1	17.8	4.5	.	.	.	.	.
951	08MAY85	30.0	10.1	15.1	5.9	.	.	.	.	.
952	09MAY85	29.0	9.1	13.4	5.5	860	1230	610	.	.
953	10MAY85	24.0	9.9	16.1	6.6	624	870	530	.	.
954	11MAY85	21.0	9.0	13.7	5.5	694	950	510	.	.
955	12MAY85	21.0	8.2	12.1	5.7	588	810	540	.	.
956	13MAY85	20.0	8.0	13.3	4.3	182	1270	500	.	.
957	14MAY85	17.0	9.5	17.3	3.6	1232	1300	1110	.	.
958	15MAY85	15.0	10.8	18.2	5.4	1094	1190	990	.	.
959	16MAY85	12.0	10.0	15.1	6.2	1087	1180	1010	.	.
960	17MAY85	11.0	12.0	19.2	6.4	1310	1530	1080	.	.
961	18MAY85	11.0	12.2	18.2	8.1	924	1490	690	.	.
962	19MAY85	11.0	12.6	19.5	8.5	1274	1640	690	.	.
963	20MAY85	17.0	11.3	15.2	7.8	1338	1670	780	.	.
964	21MAY85	20.0	11.3	16.5	8.6	1488	1720	1230	.	.
965	22MAY85	19.0	12.2	19.7	7.0	1364	1540	1270	.	.
966	23MAY85	17.0	12.7	19.8	7.3	1355	1510	1250	.	.
967	24MAY85	17.0	12.9	19.5	8.3	1411	1580	1240	.	.
968	25MAY85	17.0	11.9	16.8	7.9	1399	1520	1310	.	.
969	26MAY85	15.0	11.8	16.2	7.9	1422	1580	1330	.	.
970	27MAY85	14.0	12.5	19.2	7.0	1426	1580	1250	.	.
971	28MAY85	14.0	12.2	18.2	7.3	1397	1520	1240	.	.
972	29MAY85	14.0	12.5	18.9	8.3	1413	1520	1270	.	.
973	30MAY85	15.0	11.8	18.2	7.1	1449	1530	1330	.	.
974	31MAY85	17.0	10.4	16.4	7.0	1368	1480	1100	.	.
975	01JUN85	17.0	11.8	17.1	8.4	1346	1540	1240	.	.
976	02JUN85	14.0	12.8	19.9	6.9	1319	1370	1250	.	.
977	03JUN85	13.0	11.9	17.8	7.4	1296	1350	1250	.	.
978	04JUN85	13.0	13.0	20.2	7.4	1333	1390	1270	.	.
979	05JUN85	13.0	13.2	19.2	7.9	1319	1390	1230	.	.
980	06JUN85	13.0	13.3	18.6	8.4	1313	1350	1270	.	.
981	07JUN85	11.0	14.7	22.1	9.0	1303	1330	1270	.	.
982	08JUN85	11.0	14.7	21.5	9.6	1323	1430	1260	.	.
983	09JUN85	11.0	14.5	21.7	9.6	1326	1380	1250	.	.
984	10JUN85	9.8	14.3	20.7	10.1	1309	1420	1210	.	.
985	11JUN85	9.8	12.9	20.1	7.1	1323	1410	1270	.	.
986	12JUN85	9.5	13.4	20.7	7.6	1322	1380	1290	.	.
987	13JUN85	11.0	14.3	21.1	8.0	1355	1570	1180	.	.
988	14JUN85	8.7	14.5	20.6	9.5	1471	1500	1430	.	.
989	15JUN85	7.9	14.4	21.3	9.5	1437	1490	1370	.	.
990	16JUN85	7.7	13.6	19.5	9.5	1455	1480	1420	.	.
991	17JUN85	7.6	14.5	21.6	8.8	1471	1580	1430	.	.
992	18JUN85	7.5	14.3	21.5	8.3	1444	1570	1200	.	.
993	19JUN85	7.3	14.4	21.7	8.4	.	.	.	.	.
994	20JUN85	7.2	14.2	21.1	9.8	.	.	.	.	.
995	21JUN85	6.9	14.5	21.5	9.7	1477	1500	1460	.	.
996	22JUN85	6.4	13.8	20.9	8.0	1479	1509	1389	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=D-CORRAL GULCH - EAST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
997	23JUN85	6.1	13.9	19.8	9.1	1496	1518	1468	.	.
998	24JUN85	5.8	13.0	18.6	10.3	1501	1537	1477	.	.
999	25JUN85	6.0	11.5	16.7	8.6	1484	1516	1446	.	.
1000	26JUN85	5.8	10.8	16.2	7.6	1462	1515	1415	.	.
1001	27JUN85	5.4	12.8	20.6	6.5	1441	1472	1414	.	.
1002	28JUN85	4.8	13.7	21.0	7.5	1467	1503	1423	.	.
1003	29JUN85	4.7	13.1	18.5	8.6	1478	1502	1462	.	.
1004	30JUN85	4.6	14.0	21.0	8.5	1481	1511	1461	.	.
1005	01JUL85	4.4	14.5	21.3	9.0	1493	1509	1469	.	.
1006	02JUL85	4.3	14.4	21.3	9.1	1512	1528	1488	.	.
1007	03JUL85	4.2	14.6	21.8	9.0	1524	1537	1507	.	.
1008	04JUL85	4.1	14.3	20.4	9.4	1535	1546	1516	.	.
1009	05JUL85	4.1	14.9	22.1	9.3	1542	1565	1525	.	.
1010	06JUL85	4.0	14.5	21.1	9.4	1542	1564	1514	.	.
1011	07JUL85	3.9	14.9	21.0	10.2	1552	1563	1543	.	.
1012	08JUL85	3.8	15.3	22.2	10.5	1558	1572	1542	.	.
1013	09JUL85	3.7	14.7	20.9	10.5	1561	1581	1541	.	.
1014	10JUL85	3.7	14.8	21.2	10.4	1551	1580	1510	.	.
1015	11JUL85	3.7	14.8	21.4	11.1	1523	1540	1500	.	.
1016	12JUL85	3.7	14.8	20.1	11.5	1517	1540	1500	.	.
1017	13JUL85	3.4	14.7	20.2	10.8	1507	1530	1480	.	.
1018	14JUL85	3.2	14.3	20.1	10.0	1502	1530	1480	.	.
1019	15JUL85	3.1	14.1	19.8	10.6	1502	1520	1480	.	.
1020	16JUL85	3.4	14.0	20.9	10.1	1505	1570	1410	.	.
1021	17JUL85	3.4	15.8	22.2	12.2	1499	1530	1470	.	.
1022	18JUL85	3.6	16.1	22.6	12.3	1518	1600	1510	.	.
1023	19JUL85	6.4	14.7	20.2	10.8	.	.	.	.	.
1024	20JUL85	7.5	15.0	21.8	11.4	.	.	.	.	.
1025	21JUL85	7.3	14.2	21.6	11.7	.	.	.	.	.
1026	22JUL85	6.5	14.3	20.5	11.7	.	.	.	.	.
1027	23JUL85	6.8	14.9	21.6	10.8	.	.	.	.	.
1028	24JUL85	7.2	15.2	23.6	10.7	.	.	.	.	.
1029	25JUL85	7.0	15.3	22.8	10.1	.	.	.	.	.
1030	26JUL85	7.2	14.2	21.7	10.5	.	.	.	.	.
1031	27JUL85	7.1	13.9	21.2	9.3	.	.	.	.	.
1032	28JUL85	6.9	13.9	18.8	9.8	1229	1360	1000	.	.
1033	29JUL85	6.7	13.9	17.4	11.7	1397	1430	1340	.	.
1034	30JUL85	6.4	.	.	.	.	.	.	.	.
1035	31JUL85	6.0	.	.	.	.	.	.	.	.
1036	01AUG85	5.6	.	.	.	.	.	.	.	.
1037	02AUG85	5.3	.	.	.	.	.	.	.	.
1038	03AUG85	4.9	.	.	.	.	.	.	.	.
1039	04AUG85	4.7	.	.	.	.	.	.	.	.
1040	05AUG85	4.4	.	.	.	.	.	.	.	.
1041	06AUG85	4.1	.	.	.	.	.	.	.	.
1042	07AUG85	3.8	.	.	.	.	.	.	.	.
1043	08AUG85	3.6	15.6	20.0	11.6	1513	1600	1500	.	.
1044	09AUG85	3.3	13.8	19.1	10.1	1530	1555	1515	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=D-CORRAL GULCH - EAST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
1045	10AUG85	3.0	12.9	17.4	8.8	1522	1560	1470	.	.
1046	11AUG85	2.9	13.6	16.0	12.3	1494	1515	1475	.	.
1047	12AUG85	2.7	13.2	17.6	9.3	1518	1540	1500	.	.
1048	13AUG85	2.6	13.1	17.7	9.0	1531	1555	1515	.	.
1049	14AUG85	2.5	13.5	19.8	10.2	1555	1580	1520	.	.
1050	15AUG85	2.4	12.7	19.5	8.0	1599	1620	1580	.	.
1051	16AUG85	2.4	12.4	18.7	8.6	1600	1620	1560	.	.
1052	17AUG85	2.4	12.9	19.2	8.4	1553	1620	1500	.	.
1053	18AUG85	2.4	13.5	18.6	10.9	1515	1550	1460	.	.
1054	19AUG85	2.4	13.2	18.8	10.1	1465	1490	1440	.	.
1055	20AUG85	2.3	13.4	19.6	9.3	1501	1540	1470	.	.
1056	21AUG85	2.3	13.2	16.7	11.1	1560	1610	1510	.	.
1057	22AUG85	2.4	13.8	18.7	10.5	1586	1620	1560	.	.
1058	23AUG85	2.3	12.9	19.2	8.9	1573	1610	1540	.	.
1059	24AUG85	2.3	12.5	19.6	8.0	1586	1615	1555	.	.
1060	25AUG85	2.3	12.6	18.9	8.2	1617	1650	1590	.	.
1061	26AUG85	2.3	12.5	18.8	8.8	1623	1655	1575	.	.
1062	27AUG85	2.3	12.8	17.2	10.3	1576	1610	1550	.	.
1063	28AUG85	2.3	13.4	19.4	10.8	1602	1615	1585	.	.
1064	29AUG85	2.3	13.2	18.0	9.7	1599	1620	1580	.	.
1065	30AUG85	2.3	12.7	16.4	9.9	1566	1605	1545	.	.
1066	31AUG85	2.2	13.2	17.7	10.7	1581	1620	1500	.	.
1067	01SEP85	2.2	13.8	17.1	11.6	1620	1645	1595	.	.
1068	02SEP85	2.3	13.2	16.9	7.3	1617	1670	1470	.	.
1069	03SEP85	2.7	.	.	.	.	.	.	.	.
1070	04SEP85	2.6	14.3	19.1	10.2	.	.	.	.	.
1071	05SEP85	2.6	12.1	18.0	8.5	.	.	.	.	.
1072	06SEP85	2.7	11.6	18.1	7.3	.	.	.	.	.
1073	07SEP85	2.6	10.5	15.8	8.0	.	.	.	.	.
1074	08SEP85	2.7	11.5	18.1	6.9	.	.	.	.	.
1075	09SEP85	2.6	11.8	17.3	8.3	.	.	.	.	.
1076	10SEP85	2.7	9.9	13.3	7.4	.	.	.	.	.
1077	11SEP85	2.6	10.3	15.0	7.8	.	.	.	.	.
1078	12SEP85	2.6	.	.	.	.	.	.	.	.
1079	13SEP85	2.4	.	.	.	.	.	.	.	.
1080	14SEP85	2.3	.	.	.	.	.	.	.	.
1081	15SEP85	2.3	.	.	.	.	.	.	.	.
1082	16SEP85	2.3	.	.	.	.	.	.	.	.
1083	17SEP85	2.2	.	.	.	.	.	.	.	.
1084	18SEP85	2.1	.	.	.	.	.	.	.	.
1085	19SEP85	2.2	.	.	.	.	.	.	.	.
1086	20SEP85	2.1	.	.	.	.	.	.	.	.
1087	21SEP85	2.1	.	.	.	.	.	.	.	.
1088	22SEP85	2.1	.	.	.	.	.	.	.	.
1089	23SEP85	2.0	.	.	.	.	.	.	.	.
1090	24SEP85	1.9	.	.	.	.	.	.	.	.
1091	25SEP85	1.9	.	.	.	.	.	.	.	.
1092	26SEP85	1.9	.	.	.	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
FIELD WATER QUALITY (FWQ) MEASUREMENTS

STAT=D-CORRAL GULCH - EAST

OBS	DATE	QM	TM	THI	TLOW	CM	CHI	CLOW	SSM	SLM
1093	27SEP85	1.9	.	.	.	.	.	.	.	.
1094	28SEP85	1.9	.	.	.	.	.	.	.	.
1095	29SEP85	1.9	.	.	.	.	.	.	.	.
1096	30SEP85	1.9	.	.	.	.	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
WATER CHEMISTRY MEASUREMENTS

STAT=B CORRAL GULCH - WEST

DATE	FLOW	TURB 7706	TURB ROL	COND	SP COND	DO	BOD	COD	PH	CO2	ALK	TEMP	THCO3	CA	MG	NA	K	TOT ALK	SO4	CL	NO3 NO2 DIS	NO3 NO2 TOT	K JEL DIS	K JEL TOT	TOT PHOS	TOT ORTHO PHOS	TOT ORG C
30JAN85	1.60	.	.	1660	11.1	.	.	8.2	.	297	A	.	.	.	.	.	0.95	.	.	.	1.0	2	.	7.5	.	0.03	.
07MAY85	0.15	.	.	1480	2.0	.	.	8.2	.	288	A	.	.	.	.	.	.	.	.	.	1.4	2	.	6.0	.	.	.

DATE	DIS	DOR TOT	TOC	DOC	SUSP SED	CYANIDE DIS	CHLOR HARD	CHLOR TOT	THARD	NCHARD	CA	MG	NA	SAR	PERCENT NA	BORON	SO4	F	CO2	SIO2	AS	BA	BE	B	CD	CR
30JAN85	0.01	0.01	.	.	.	.	3	.	720	420	140	89	120	2	27	.	1.1	25	580	0.2	4	22	4	.	.	.	100	.	.
07MAY85	.	0.01	.	14	.	.	3	.	.	.	120	80	110	.	.	.	2.4	19	480	0.3	4	24	5	.	.	.	90	.	.

DATE	COLOR	FOAM	PHEN	MBAS	ODOR	CNDVY	NAPHTH	ZN	SAR	AGGR	GLASS	SED	TOT ZOOPL	ODOR	COLOR	TOT FECAL	PH	TDS	TDS	HARD	NON CARB HARD	NON CARB HARD	BORON	SAR	CHLOR
30JAN85	.	7	.	.	5	.	.	6	.	.	.	.	35	15	.	.	.	6	.	.	.	.	.	1280	1200	0.05	.	.	.	.	2700	7
07MAY85	.	13	.	.	26	5	.	.	8	.	.	.	.	34	17	.	.	.	6	.	.	.	.	.	1120	.	0.08	.	.	.	.	2100	7

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
WATER CHEMISTRY MEASUREMENTS

STAT=C--BOX ELDER GULCH - WEST

DATE	FLOW	BARO	TOTAL RECOV	TOTAL OIL	SPEC. COND	DISS. OXYGEN	BOD	COLIFORM	FECAL COLIFORM	FECAL STREP	ALKALINITY	TOTAL HARD	TOTAL NONCARB	CALCIUM HARD	MAGNESIUM HARD	SODIUM	POTASSIUM	SULFATE	CHLORIDE	FLUORIDE	SILICA	NITRATE	PHOSPHATE	IRON	MANGANESE	BORON	ARSENIC	SELENIUM	MERCURY	GROSS ALPHA	GROSS BETA	RADIUM 226	RADIUM 228	NATURAL URANIUM
11MAR85	0.5	.	.	.	358	.	.	.	8	1.3	87	A	.	.	.	.	.	.	.	1.8	.	.	.	0.03	2.1	2	.	.	1.1	.	1.6	.	0.61	0.51	.	30	.	.	.	3	.	140	56	34	14	19

DATE	SELENIUM	FERROUS IRON	NITRATE	AMMONIA	SULFIDE	CARBONATE	SODIUM ADSORP RATIO	CHROMIUM	ARSENIC	BARIUM	BORON	CADMIUM	COBALT	COPPER	FLUORIDE	IRON	MERCURY	MOLYBDENUM	NICKEL	LEAD	SELENIUM	STRONTIUM	VANADIUM	ZINC	GROSS ALPHA	GROSS BETA	RADIUM 226	RADIUM 228	NATURAL URANIUM	TOTAL DISSOLVED SOLIDS	TOTAL SUSPENDED SOLIDS	TOTAL VOLATILE SOLIDS	TOTAL ORGANIC CARBON	TOTAL ORGANIC HALIDES	CHEMICAL OXYGEN DEMAND
11MAR85	0.7	21	.	9.7	6.6	84	.	4	7.7	3	.	.	.	40	.	.	.	120	.	.	7	5	.	.	6	.	.	.	.	.	.	.	2	.	.	.	6	.	.	.	.	266	230	0.26	.	.	.	.	390	7

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
UNITED STATES GEOLOGICAL SURVEY GAUGING STATION DATA
WATER CHEMISTRY MEASUREMENTS

STAT=D-CORRAL GULCH - EAST

DATE	FLOW	TURB 7706	TURB 7706	COLOR	SPCOND	DO	BOD	COD	PH	CO2	ALK	THYPE	TCA3	OIL&GR	O&G 5520	NH3-N	NO2-NO3	TOT KJEL	KJEL 6202	CA 2503	TKN 6202	NO2-NO3	TOT P 0404	O-PO4	TOT P
30JAN85	6.80	.	.	.	1510	7.8	.	.	7.9	.	449	A	.	.	.	.	0.48	.	.	.	.	0.5	2	.	.	1.7	.	0.09	.
.	0.33	.	.	.	1240	6.8	.	.	8.2	.	305	A	.	.	.	.	.	.	.	.	.	1.5	2	.	.	3.8	.	.	.
04SEP85	2.80	.	.	.	1650	7.3	.	.	8.1	.	372	A	.	.	.	.	0.38	.	.	.	0.01	0.4	2	.	.	2.9	.	.	.

DATE	DIS-P	DORTH-P	TOC	DOC	SUSP-OC	SCYAN-IDES	TCHS	HCO3	THARD	NCHARD	SAR	FERNA	NA-K	K	CL	SO4	F	SICO2	ABSA	BBEI	B	CDR	CRU
30JAN85	0.02	0.03	.	.	.	.	3	.	600	150	99	85	170	3	38	.	1.3	14	450	0.5	4	23	5	74	.	.	150	.	.	1
.	0.01	0.01	.	12.0	.	.	3	.	.	.	120	69	85	.	.	.	1.7	15	340	0.3	4	24	6	.	.	.	80	.	.	.
04SEP85	0.01	0.01	.	8.7	.	.	3	.	640	270	110	88	150	37	34	.	1.5	19	500	0.4	4	2	6	.	.	.	140	.	.	.

DATE	FE	FB	MN	MOL	CC5	NI	AG	V	ZN	SN	SAL	GA	GE	GI	SE	TI	ZR	ODC6	COCLI	FCOLI	FENOL	PHCB	TDS	TDS2	TDS3	NH3	NO3	NO2	BR	HG	SR	CC7
30JAN85	8	.	15	27	5	1	.	9.0	13	.	20	.	.	42	7	.	.	.	6	.	.	.	.	.	1160	1100	0.02	.	.	0.04	.	3100	7
.	3	.	.	23	5	.	.	8.3	.	.	.	.	.	21	12	.	.	.	6	.	.	.	.	.	885	.	0.05	.	.	.	.	1900	7
04SEP85	12	.	.	29	5	.	.	8.0	.	.	.	.	.	26	12	.	.	.	6	.	.	.	.	.	1230	1100	0.02	.	.	.	0.1	2800	7

APPENDIX 5-2.1

1985 Retort Abandonment Water Chemistry Data Listing

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=AM-3U

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FEC	DOS	AS	EV	MOL	HG	ALE	BER	CUB	CPB	LI	MN	NIR	SZN
1	07MAY85	8.27	1170	705	367	34	38	0.50	158	420	-1	8.5	240	-0.02	1.0	0.49	0.11	.	-2	.	.	.	-0.1	-0.3	.	.	.	.	.	0.14	.	.	.
2	11JUN85	8.35	1085	729	366	34	40	0.53	159	418	2	6.1	236	-0.02	0.9	0.27	0.10	.	4	.	.	.	0.1	-0.3	.	.	.	.	.	0.11	.	.	.

STATION=CE-702U

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FEC	DOS	AS	EV	MOL	HG	ALE	BER	CUB	CPB	LI	MN	NIR	SZN
3	08MAY85	8.39	1480	989	516	35	68	0.42	215	574	13	10.3	297	0.02	1.6	0.29	0.19	.	3	.	.	.	-0.1	-0.3	.	.	.	.	.	0.21	.	.	.
4	11JUN85	8.27	1780	1270	489	64	108	0.58	208	565	-1	9.0	564	-0.02	1.2	0.14	0.18	.	5	.	.	.	0.1	-0.3	.	.	.	.	.	0.16	.	.	.

STATION=CE-705AU

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FEC	DOS	AS	EV	MOL	HG	ALE	BER	CUB	CPB	LI	MN	NIR	SZN
5	07MAY85	7.96	1380	927	368	60	68	0.43	148	424	-1	30.5	378	-0.02	0.4	0.36	0.09	.	3	.	.	.	-0.1	-0.3	.	.	.	.	.	0.14	.	.	.
6	11JUN85	7.93	1240	869	339	65	72	0.50	115	390	-1	30.4	332	-0.02	0.4	0.18	0.08	.	4	.	.	.	0.1	-0.3	.	.	.	.	.	0.10	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=CE-708U

OBS	DATE	PH	SPCOND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DO	AS	SEV	MOL	HG	AL	AB	ER	CC	UP	BB	LI	MN	NI	SR	ZN
7	08MAY85	8.03	1102	709	373	47	47	0.44	135	429	-1	10.7	239	-0.02	0.5	0.48	0.09	.	5	.	.	-0.1	-0.3	.	.	.	.	.	.	0.13	.	.	.	.
8	11JUN85	8.16	1045	713	356	41	48	0.52	134	411	-1	8.3	227	-0.02	0.5	0.28	0.08	.	4	.	.	0.1	-0.3	.	.	.	.	.	.	0.10	.	.	.	.

STATION=CE-709U

OBS	DATE	PH	SPCOND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DO	AS	SEV	MOL	HG	AL	AB	ER	CC	UP	BB	LI	MN	NI	SR	ZN
9	08MAY85	7.36	1820	1421	450	170	93	0.81	129	525	-1	17.4	570	-0.02	0.3	0.07	0.13	.	6	.	.	0.1	-0.3	.	.	.	.	.	.	0.21	.	.	.	.
10	11JUN85	7.54	1700	1330	437	152	93	0.85	126	502	-1	16.6	571	-0.02	0.3	-0.05	0.13	.	6	.	.	0.1	-0.3	.	.	.	.	.	.	0.09	.	.	.	.

STATION=GS-D3U

OBS	DATE	PH	SPCOND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DO	AS	SEV	MOL	HG	AL	AB	ER	CC	UP	BB	LI	MN	NI	SR	ZN
11	08MAY85	7.17	2490	2227	425	268	156	0.53	139	489	-1	13.1	1150	0.02	0.4	0.36	0.22	.	5	.	.	0.4	-0.3	.	.	.	.	.	.	0.45	.	.	.	.
12	12JUN85	9.91	2040	1600	586	176	121	0.55	154	295	192	12.1	752	-0.02	0.6	0.22	0.13	.	6	.	.	0.3	-0.3	.	.	.	.	.	.	0.24	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=GS-MDP2CU

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	OAS EV	MOL	HG	AL	ERUB	CPB	LI	MNIR	SZN
13	08MAY85	7.31	3030	2704	505	250	211	1.7	233	585	-1	19.6	1354	0.02	0.8	0.78	0.25	.	5	. . .	0.6	-0.3	.	. . . .	.	0.62	. . . .	
14	12JUN85	7.48	2310	1940	477	253	126	0.9	149	548	-1	16.2	1040	-0.02	0.6	0.23	0.11	.	13	. . .	0.4	-0.3	.	. . . .	.	0.25	. . . .	

STATION=GS-M10U

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	OAS EV	MOL	HG	AL	ERUB	CPB	LI	MNIR	SZN
15	07MAY85	7.94	1300	906	370	46	80	0.43	131	429	-1	9.66	369	-0.02	1.2	0.24	0.15	.	2	. . .	-0.1	-0.3	.	. . . .	.	0.16	. . . .	
16	12JUN85	7.91	1340	896	378	46	82	0.44	129	437	-1	9.50	388	-0.02	1.1	0.10	0.11	.	14	. . .	-0.1	-0.3	.	. . . .	.	0.19	. . . .	

STATION=GS-M12U

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	OAS EV	MOL	HG	AL	ERUB	CPB	LI	MNIR	SZN
17	07MAY85	7.83	1502	1076	406	61	74	0.56	180	468	-1	6.39	450	-0.02	0.5	0.95	0.12	.	3	. . .	-0.1	-0.3	.	. . . .	.	0.24	. . . .	
18	12JUN85	7.83	1530	1070	387	60	80	0.55	179	445	-1	6.60	518	-0.02	0.5	0.38	0.07	.	-2	. . .	-0.1	-0.3	.	. . . .	.	0.23	. . . .	

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=GS-M3U

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	OAS EV	MOL	H GL	ABLE	BCR	CCU	PB	L I	MNI	NSR	ZN
19	07MAY85	9.86	1320	831	593	3.3	38	1.37	261	288	193	13.3	145	5.05	1.6	1.26	0.16	.	4	. . .	-0.1	-0.3	. . .	. . .	. . .	.	0.20	. . .	. . .	.
20	12JUN85	9.90	1280	842	587	3.5	38	1.48	261	293	192	13.7	154	1.07	1.6	0.13	0.14	.	18	. . .	-0.1	-0.3	. . .	. . .	. . .	.	0.27	. . .	. . .	.

STATION=GS-M9U

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	OAS EV	MOL	H GL	ABLE	BCR	CCU	PB	L I	MNI	NSR	ZN
21	07MAY85	7.22	3080	2675	750	270	200	1.95	250	873	-1	13.3	1331	-0.02	-0.1	0.38	0.13	.	2	. . .	0.1	-0.3	. . .	. . .	. . .	.	0.42	. . .	. . .	.
22	12JUN85	7.16	3200	2620	746	264	205	2.11	251	871	-1	12.8	1320	-0.02	-0.1	0.22	0.09	.	-2	. . .	-0.1	-0.3	. . .	. . .	. . .	.	0.30	. . .	. . .	.

STATION=GS-S29D

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	OAS EV	MOL	H GL	ABLE	BCR	CCU	PB	L I	MNI	NSR	ZN
23	10MAY85	8.11	4980	4093	1031	105	320	2.21	740	1201	-1	45.1	1969	-0.02	0.7	0.16	0.46	.	13	. . .	0.2	-0.3	. . .	. . .	. . .	.	0.18	. . .	. . .	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=GS-S29S

OBS	DATE	PH	SPC-COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	ASEV	MOL	HG	ALERUB	CCFI	LMN	NIRN	SZN
24	10MAY85	8.11	3990	3117	1144	113	238	3.7	600	1340	-1	293	1195	-0.02	0.4	0.13	0.45	.	11	. . .	-0.1	-0.3	. . . . .	0.16	. . . .		

STATION=GS-15U

OBS	DATE	PH	SPC-COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	ASEV	MOL	HG	ALERUB	CCFI	LMN	NIRN	SZN
25	07MAY85	8.28	2100	1583	453	58	142	0.73	247	522	-1	10.2	833	-0.02	0.4	0.36	0.16	.	-2	. . .	-0.1	-0.3	. . . . .	0.36	. . . .		
26	12JUN85	8.19	2300	1640	467	63	152	0.80	254	540	-1	8.7	877	-0.02	0.4	0.16	0.12	.	-2	. . .	-0.1	-0.3	. . . . .	0.34	. . . .		

STATION=MINE

OBS	DATE	PH	SPC-COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	ASEV	MOL	HG	ALERUB	CCFI	LMN	NIRN	SZN
27	25FEB85	7.93	1920	1480	338	89	118	2.50	186	387	-1	19.8	718	0.03	0.6	0.15	0.19	.	3	. . .	-0.1	-0.3	. . . . .	0.13	. . . .		
28	25MAR85	8.22	1790	1299	327	65	112	2.60	191	370	-1	24.0	705	-0.02	0.5	0.09	0.14	.	4	. . .	-0.1	-0.3	. . . . .	0.12	. . . .		
29	13MAY85	8.13	2020	1480	346	89	120	1.85	184	393	-1	24.9	742	-0.02	0.5	0.33	0.15	.	10	. . .	-0.1	-0.3	. . . . .	0.26	. . . .		
30	18JUN85	7.65	2060	1410	442	121	116	1.39	169	509	-1	19.7	728	-0.02	0.5	0.23	0.12	.	31	. . .	0.2	-0.3	. . . . .	0.27	. . . .		

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=MINEDIS-2

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
31	30MAY85	7.88	2250	1920	493	214	135	0.91	164	570	-1	12.5	982	-0.02	0.7	0.15	0.14	.	7	.	.	.	0.3	-0.3	.	.	.	.	.	0.36	.	.	.	.

STATION=PBC-2

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE
32	23OCT85	8.8	2600	2270	40	296	19	166	231	17	5	16.1	1470	-0.02	1.8	0.67	0.44	-0.05

OBS	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
32	10	-0.01	-0.01	-0.1	0.2	-0.3	-0.1	-0.01	-0.01	-0.01	-0.01	0.47	0.04	-0.05	6.3	0.01

STATION=PBC-3

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE
33	23OCT85	7.33	2660	2310	35	285	26	178	235	22	-1	23.1	1480	-0.02	2	0.76	0.28	-0.05

OBS	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
33	10	-0.01	-0.01	-0.1	-0.1	-0.3	-0.1	-0.01	-0.01	-0.01	-0.01	0.53	0.15	-0.05	6.8	0.01

STATION=RAM-1A

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
34	08MAY85	7.44	1680	1254	450	132	97	0.43	125	529	1	15.6	526	0.04	0.3	0.19	0.10	.	5	.	.	.	0.3	-0.3	.	.	.	.	.	0.22	.	.	.	.
35	11JUN85	7.63	1680	1300	446	132	101	0.52	126	515	-1	16.8	547	-0.02	0.3	0.09	0.11	.	8	.	.	.	0.3	-0.3	.	.	.	.	.	0.10	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=RAM-2A

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	ASE	SEV	MOL	HG	ALE	BER	CRU	CBP	LI	MN	NIR	SZN
36	25FEB85	7.42	2390	2210	456	236	160	9.2	179	521	-1	15.8	1110	-0.02	0.5	0.21	0.31	.	2	.	.	-0.1	-0.3	.	.	.	.	0.13	.	.	.
37	25MAR85	7.47	2620	2160	465	222	160	10.3	190	526	-1	16.8	1220	-0.02	0.5	0.22	0.20	.	4	.	.	0.2	-0.3	.	.	.	.	0.17	.	.	.
38	13MAY85	7.35	2590	2050	452	207	141	10.9	193	517	-1	17.4	1032	0.16	0.5	0.64	0.26	.	9	.	.	0.1	-0.3	.	.	.	.	0.47	.	.	.
39	18JUN85	7.59	2170	1710	545	181	130	3.8	155	633	-1	14.1	816	-0.02	0.6	0.25	0.12	.	13	.	.	0.3	-0.3	.	.	.	.	0.21	.	.	.
40	27JUN85	7.60	2130	1640	544	185	136	3.8	152	626	-1	14.2	809	-0.02	0.6	0.22	0.16	.	5	.	.	0.2	-0.3	.	.	.	.	0.20	.	.	.
41	09JUL85	8.03	2130	1670	533	192	129	4.2	155	616	-1	14.1	813	-0.02	0.7	0.17	0.17	.	14	.	.	0.2	-0.3	.	.	.	.	0.20	.	.	.
42	18SEP85	7.55	2220	1870	553	184	144	5.1	169	641	-1	14.5	869	-0.02	0.7	0.21	0.20	.	8	.	.	0.1	-0.3	.	.	.	.	0.27	.	.	.
43	23OCT85	7.79	2190	1890	495	198	136	12.0	173	567	-1	16.2	938	-0.02	0.5	0.34	0.26	.	8	.	.	0.3	-0.3	.	.	.	.	0.21	.	.	.

STATION=RAM-2B

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	ASE	SEV	MOL	HG	ALE	BER	CRU	CBP	LI	MN	NIR	SZN
44	25FEB85	7.33	3080	3200	546	268	260	2.70	252	625	-1	9.5	1720	-0.02	0.9	0.31	0.28	.	2	.	.	-0.1	-0.3	.	.	.	.	0.20	.	.	.
45	25MAR85	7.89	3410	2933	554	247	273	2.80	258	634	-1	10.4	1670	-0.02	0.9	0.37	0.17	.	11	.	.	0.3	-0.3	.	.	.	.	0.20	.	.	.
46	13MAY85	7.29	3210	2710	544	275	270	3.00	153	626	-1	10.8	1545	0.03	0.9	0.75	0.29	.	8	.	.	0.4	-0.3	.	.	.	.	0.62	.	.	.
47	18JUN85	7.40	2490	1950	536	154	174	1.69	220	615	-1	10.6	1080	-0.02	0.9	0.35	0.14	.	5	.	.	0.4	-0.3	.	.	.	.	0.30	.	.	.
48	27JUN85	7.72	2430	1900	536	161	176	1.47	191	618	-1	10.5	1040	-0.02	0.8	0.34	0.17	.	7	.	.	0.5	-0.3	.	.	.	.	0.23	.	.	.
49	09JUL85	7.58	2520	2010	534	165	185	1.26	200	615	-1	10.6	1100	-0.02	0.9	0.28	0.20	.	4	.	.	0.5	-0.3	.	.	.	.	0.25	.	.	.
50	18SEP85	7.60	2600	2270	555	146	209	0.91	222	643	-1	10.3	1050	-0.02	0.9	0.28	0.19	.	9	.	.	0.5	-0.3	.	.	.	.	0.31	.	.	.
51	23OCT85	7.95	2610	2330	532	179	215	0.94	212	611	-1	11.6	1240	-0.02	0.8	0.38	0.20	.	5	.	.	0.5	-0.3	.	.	.	.	0.24	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=RAM-2C

OBS	DATE	PH	SPCOND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	AS	SEV	MOL	HG	AL	BER	CRU	CPB	LI	MN	NIR	SZN
52	13MAY85	7.97	1640	1057	601	50	93	1.9	186	698	-1	10.1	277	0.03	1.1	0.67	0.15	.	10	.	.	-0.1	-0.3	.	.	.	.	0.18	.	.	.
53	19JUN85	8.09	1670	1170	543	56	95	3.2	185	632	-1	11.3	424	-0.02	1.0	0.46	0.14	.	15	.	.	-0.1	-0.3	.	.	.	.	0.24	.	.	.
54	26JUN85	8.08	1630	1090	544	55	97	3.1	183	633	-1	10.6	417	-0.02	0.9	0.45	0.15	.	8	.	.	-0.1	-0.3	.	.	.	.	0.18	.	.	.
55	08JUL85	7.98	1620	1070	542	56	95	3.2	183	631	-1	10.4	411	-0.02	1.0	0.44	0.16	.	19	.	.	-0.1	-0.3	.	.	.	.	0.20	.	.	.
56	18SEP85	8.27	1570	1080	560	54	94	3.2	196	652	-1	10.4	388	-0.02	1.0	0.35	0.16	.	11	.	.	-0.1	-0.3	.	.	.	.	0.17	.	.	.
57	25OCT85	8.27	1550	1090	539	56	94	4.8	185	634	-1	10.9	403	-0.02	1.0	0.39	0.17	.	4	.	.	-0.1	-0.3	.	.	.	.	0.12	.	.	.

STATION=RAM-2G

OBS	DATE	PH	SPCOND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	AS	SEV	MOL	HG	AL	BER	CRU	CPB	LI	MN	NIR	SZN
58	25FEB85	7.72	1980	1460	546	58	109	17.0	252	630	-1	9.40	593	-0.02	2.0	0.76	0.35	.	-2	.	.	-0.1	-0.3	.	.	.	.	0.15	.	.	.
59	25MAR85	7.86	2110	1528	557	57	101	26.0	279	641	-1	10.60	677	-0.02	3.0	1.24	0.23	.	5	.	.	0.2	-0.3	.	.	.	.	0.14	.	.	.
60	13MAY85	7.54	1950	1372	538	61	114	5.3	226	621	-1	9.83	635	-0.02	1.6	0.83	0.23	.	13	.	.	0.2	-0.3	.	.	.	.	0.30	.	.	.
61	18JUN85	8.24	3220	2250	622	50	45	114.0	588	716	-1	19.20	1110	-0.02	9.7	8.32	0.66	.	7	.	.	0.1	-0.3	.	.	.	.	0.32	.	.	.
62	27JUN85	8.11	3030	2080	610	52	56	99.0	510	703	-1	18.20	1010	-0.02	8.0	6.68	0.58	.	16	.	.	-0.1	-0.3	.	.	.	.	0.27	.	.	.
63	09JUL85	7.99	2550	1770	579	54	78	61.0	403	662	-1	14.20	856	-0.02	5.5	4.72	0.44	.	4	.	.	0.1	-0.3	.	.	.	.	0.22	.	.	.
64	18SEP85	7.93	1960	1390	548	57	109	14.0	270	636	-1	10.50	596	-0.02	2.3	0.83	0.25	.	8	.	.	0.2	-0.3	.	.	.	.	0.24	.	.	.
65	23OCT85	8.06	2000	1470	545	57	101	22.0	287	634	-1	11.70	659	-0.02	2.7	1.37	0.27	.	19	.	.	0.2	-0.3	.	.	.	.	0.19	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=RAM-3A

OBS	DATE	PH	SPCOND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	U	B	LI	MN	NI	R	SN	SZ
66	13MAY85	7.48	1860	1378	485	135	113	0.58	140	558	-1	14.7	636	0.03	0.5	0.20	0.23	.	11	.	.	.	0.2	-0.3	.	.	.	.	.	0.28	.	.	.	.
67	18JUN85	7.66	2200	1570	481	145	119	1.45	196	553	-1	17.8	804	-0.02	0.6	0.16	0.13	.	14	.	.	.	0.3	-0.3	.	.	.	.	.	0.29	.	.	.	.

STATION=RAM-3B

OBS	DATE	PH	SPCOND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	U	B	LI	MN	NI	R	SN	SZ
68	13MAY85	8.01	2080	1515	533	84	140	1.62	204	614	-1	13.0	695	-0.02	1.1	0.46	0.25	.	6	.	.	.	0.3	-0.3	.	.	.	.	.	0.32	.	.	.	.
69	18JUN85	7.63	2120	1610	505	114	152	0.88	192	580	-1	16.1	854	-0.02	1.1	0.30	0.13	.	11	.	.	.	0.3	-0.3	.	.	.	.	.	0.28	.	.	.	.

STATION=RAM-3C

OBS	DATE	PH	SPCOND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	U	B	LI	MN	NI	R	SN	SZ
70	13MAY85	7.93	1460	956	500	19	72	0.66	215	588	-1	11.5	291	40.50	1.5	0.41	0.17	.	6	.	.	.	-0.1	-0.3	.	.	.	.	.	0.23	.	.	.	.
71	19JUN85	8.60	1610	1080	502	22	70	1.12	248	548	16	13.8	389	1.76	1.6	0.24	0.25	.	16	.	.	.	-0.1	-0.3	.	.	.	.	.	0.29	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=RAM-4A

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	OAS	SEV	MOL	HG	ALE	BRU	CCB	PI	LIN	MNI	SIR	ZN
72	13MAY85	7.42	1750	1309	486	134	105	0.52	137	558	-1	20.5	560	-0.02	0.5	0.18	0.18	.	6	.	.	0.6	-0.3	.	.	.	.	0.24	.	.	.
73	18JUN85	7.57	1720	1300	443	135	95	0.45	129	512	-1	18.7	579	-0.02	0.5	0.15	0.08	.	18	.	.	1.1	-0.3	.	.	.	.	0.21	.	.	.

STATION=RAM-4B

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	OAS	SEV	MOL	HG	ALE	BRU	CCB	PI	LIN	MNI	SIR	ZN
74	13MAY85	7.60	2080	1680	489	148	134	1.01	178	579	-1	10.9	787	-0.02	0.8	0.61	0.23	.	6	.	.	-0.1	-0.3	.	.	.	.	0.36	.	.	.
75	18JUN85	7.76	1710	1250	477	95	100	0.43	158	553	-1	13.6	551	-0.02	0.7	0.30	0.10	.	13	.	.	0.1	-0.3	.	.	.	.	0.27	.	.	.

STATION=RAM-4C

OBS	DATE	PH	SPC COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	OAS	SEV	MOL	HG	ALE	BRU	CCB	PI	LIN	MNI	SIR	ZN
76	13MAY85	8.01	2220	1609	479	91	131	0.77	231	550	-1	11.0	753	2.2	1.4	0.51	0.26	.	7	.	.	-0.1	-0.3	.	.	.	.	0.37	.	.	.
77	18JUN85	7.91	1780	1230	457	57	96	0.39	223	531	-1	10.2	600	3.6	1.4	0.32	0.11	.	9	.	.	-0.1	-0.3	.	.	.	.	0.30	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=RAM-5A

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	ASEV	MOL	HG	ALERUB	CCFB	LI	MNIRN	SZN
78	13MAY85	7.48	1890	1359	482	151	112	0.99	137	555	-1	16.1	555	0.06	0.3	0.15	0.16	.	7	. . .	0.5	-0.3	. . . . .	.	0.27	. . . .	. . . .
79	18JUN85	7.72	1710	1240	465	133	97	0.52	130	539	-1	16.8	562	-0.02	0.4	0.12	0.10	.	5	. . .	0.6	-0.3	. . . . .	.	0.19	. . . .	. . . .
80	26JUN85	7.51	1710	1200	465	135	98	0.66	130	537	-1	17.1	564	-0.02	0.4	-0.05	0.12	.	9	. . .	0.6	-0.3	. . . . .	.	0.15	. . . .	. . . .
81	08JUL85	7.60	1720	1220	471	133	96	0.75	130	537	-1	16.4	562	-0.02	0.7	0.06	0.14	.	5	. . .	0.5	-0.3	. . . . .	.	0.15	. . . .	. . . .
82	18SEP85	7.52	1690	1320	471	113	100	0.50	138	542	-1	17.1	549	-0.02	0.3	0.06	0.13	.	8	. . .	0.5	-0.3	. . . . .	.	0.13	. . . .	. . . .
83	23OCT85	8.08	1660	1280	457	126	99	0.52	140	527	-1	17.5	569	-0.02	0.4	0.06	0.16	.	9	. . .	0.4	-0.3	. . . . .	.	0.10	. . . .	. . . .

STATION=RAM-5B

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	ASEV	MOL	HG	ALERUB	CCFB	LI	MNIRN	SZN
84	25FEB85	7.51	4010	3980	530	326	304	4.10	356	604	-1	13.7	2180	-0.02	1.0	0.26	0.29	.	-2	. . .	-0.1	-0.3	. . . . .	.	0.21	. . . .	. . . .
85	25MAR85	7.52	4010	3777	536	315	322	4.20	345	611	-1	14.4	2380	-0.02	1.0	0.30	0.18	.	9	. . .	0.2	-0.3	. . . . .	.	0.21	. . . .	. . . .
86	13MAY85	7.47	3980	3792	534	320	303	4.80	330	608	-1	14.5	2287	-0.02	1.0	0.63	0.22	.	9	. . .	0.3	-0.3	. . . . .	.	0.65	. . . .	. . . .
87	18JUN85	7.48	2710	2210	514	173	197	2.60	239	580	-1	12.9	1260	-0.02	1.0	0.42	0.13	.	3	. . .	0.6	-0.3	. . . . .	.	0.32	. . . .	. . . .
88	27JUN85	7.60	2690	2160	517	174	187	2.40	235	593	-1	12.9	1210	-0.02	0.9	0.34	0.16	.	16	. . .	0.5	-0.3	. . . . .	.	0.25	. . . .	. . . .
89	08JUL85	7.67	2700	2150	517	174	189	2.80	239	592	-1	12.9	1210	-0.02	1.1	0.30	0.21	.	5	. . .	0.5	-0.3	. . . . .	.	0.20	. . . .	. . . .
90	18SEP85	7.58	2820	2530	586	188	196	1.05	270	636	-1	13.1	1330	-0.02	0.9	0.31	0.17	.	9	. . .	0.6	-0.3	. . . . .	.	0.30	. . . .	. . . .
91	23OCT85	7.93	2730	2430	520	180	201	2.22	267	611	-1	13.8	1300	-0.02	0.9	0.34	0.13	.	10	. . .	0.5	-0.3	. . . . .	.	0.23	. . . .	. . . .

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=RAM-5C

OBS	DATE	PH	SPC-COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	ASEV	MOL	HG	ALER	BCRU	CPB	LI	MN	NIR	SZN
92	13MAY85	8.02	2100	1409	481	69	125	1.57	216	553	-1	12.0	674	-0.02	1.1	0.41	0.21	.	7	. . .	-0.1	-0.3	. . . . .			0.30	. . . .		
93	19JUN85	8.41	2010	1440	447	73	104	17.00	231	498	8	12.5	714	-0.02	1.3	0.66	0.18	.	4	. . .	-0.1	-0.3	. . . . .			0.34	. . . .		
94	26JUN85	7.91	1960	1430	455	71	110	14.00	221	522	-1	11.7	706	-0.02	1.3	0.54	0.16	.	7	. . .	-0.1	-0.3	. . . . .			0.27	. . . .		
95	08JUL85	8.00	1990	1390	457	73	104	13.00	228	524	-1	12.2	708	-0.02	1.4	0.54	0.20	.	7	. . .	-0.1	-0.3	. . . . .			0.25	. . . .		
96	18SEP85	8.06	1890	1400	530	68	115	9.00	228	570	-1	12.6	642	-0.02	1.1	0.40	0.15	.	7	. . .	-0.1	-0.3	. . . . .			0.25	. . . .		
97	23OCT85	8.30	1860	1400	463	75	117	9.50	222	535	-1	12.8	668	-0.02	1.1	0.43	0.15	.	6	. . .	-0.1	-0.3	. . . . .			0.21	. . . .		

STATION=RAM-6A

OBS	DATE	PH	SPC-COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	ASEV	MOL	HG	ALER	BCRU	CPB	LI	MN	NIR	SZN
98	13MAY85	7.55	1900	1408	485	138	111	0.77	138	559	-1	15.4	627	0.04	0.6	0.16	0.12	.	12	. . .	0.4	-0.3	. . . . .			0.31	. . . .		
99	18JUN85	7.57	1680	1220	461	121	101	0.74	130	535	-1	17.5	556	-0.02	0.5	0.13	0.10	.	7	. . .	0.5	-0.3	. . . . .			0.19	. . . .		
100	26JUN85	7.63	1680	1180	467	121	101	0.65	128	537	-1	17.2	552	-0.02	0.5	0.12	0.10	.	7	. . .	0.5	-0.3	. . . . .			0.11	. . . .		
101	09JUL85	7.63	1670	1250	464	120	95	0.74	127	533	-1	16.4	542	-0.02	0.6	0.05	0.13	.	5	. . .	0.5	-0.3	. . . . .			0.15	. . . .		
102	18SEP85	7.68	1660	1290	474	97	102	0.41	139	547	-1	16.4	523	-0.02	0.4	0.07	0.13	.	9	. . .	0.4	-0.3	. . . . .			0.15	. . . .		
103	23OCT85	8.03	1610	1260	470	119	102	0.47	132	543	-1	17.0	528	-0.02	0.5	-0.05	0.11	.	11	. . .	0.4	-0.3	. . . . .			0.12	. . . .		

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=RAM-6B

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	ASE	SV	MOL	HG	AL	BER	CRU	CPB	LI	MN	NI	SR	ZN
104	25FEB85	7.66	2610	2270	490	151	177	28.0	246	561	-1	17.1	1120	-0.02	0.9	0.60	0.42	.	3	.	.	-0.1	-0.3	.	.	.	.	0.23	.	.	.	.
105	25MAR85	7.72	2700	2164	488	144	180	32.0	240	559	-1	17.2	1210	-0.02	1.0	0.76	0.27	.	6	.	.	-0.1	-0.3	.	.	.	.	0.25	.	.	.	.
106	13MAY85	7.64	3050	2337	452	160	170	47.0	257	518	-1	19.0	1229	-0.02	0.9	1.71	0.35	.	7	.	.	0.1	-0.3	.	.	.	.	0.66	.	.	.	.
107	18JUN85	7.54	2590	1810	519	115	184	4.0	199	601	-1	17.3	967	-0.02	0.9	0.44	0.15	.	30	.	.	0.1	-0.3	.	.	.	.	0.35	.	.	.	.
108	26JUN85	7.63	2350	1800	524	117	181	4.2	196	603	-1	17.1	973	-0.02	0.9	0.39	0.16	.	2	.	.	0.1	-0.3	.	.	.	.	0.27	.	.	.	.
109	09JUL85	7.63	2370	1930	528	117	183	4.5	200	603	-1	16.9	972	-0.02	0.9	0.38	0.22	.	8	.	.	0.1	-0.3	.	.	.	.	0.27	.	.	.	.
110	18SEP85	7.71	2340	1940	550	111	186	4.1	220	630	-1	16.7	961	-0.02	0.9	0.31	0.21	.	9	.	.	0.1	-0.3	.	.	.	.	0.31	.	.	.	.
111	23OCT85	8.13	2270	1870	520	108	190	4.0	214	611	-1	17.7	936	-0.02	0.9	0.33	0.16	.	3	.	.	-0.1	-0.3	.	.	.	.	0.24	.	.	.	.

STATION=RAM-6C

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	ASE	SV	MOL	HG	AL	BER	CRU	CPB	LI	MN	NI	SR	ZN
112	13MAY85	8.35	1300	873	485	20	48	1.99	215	556	3	12.1	221	-0.02	1.5	0.34	0.18	.	5	.	.	-0.1	-0.3	.	.	.	.	0.18	.	.	.	.
113	19JUN85	8.30	1610	1050	622	28	75	2.00	230	730	-1	12.7	293	-0.02	1.5	0.27	0.13	.	5	.	.	-0.1	-0.3	.	.	.	.	0.25	.	.	.	.
114	26JUN85	8.28	1590	1040	476	29	77	1.98	227	551	-1	12.0	416	-0.02	1.6	0.28	0.11	.	4	.	.	-0.1	-0.3	.	.	.	.	0.18	.	.	.	.
115	08JUL85	8.30	1570	1050	478	28	74	2.50	231	549	-1	12.0	424	-0.02	1.5	0.20	0.16	.	3	.	.	-0.1	-0.3	.	.	.	.	0.16	.	.	.	.
116	18SEP85	8.30	1480	1020	495	26	67	1.96	238	569	-1	11.5	356	-0.02	1.4	0.19	0.15	.	5	.	.	0.1	-0.3	.	.	.	.	0.14	.	.	.	.
117	23OCT85	8.41	1460	1020	470	27	73	1.90	230	535	8	11.9	376	0.13	1.4	0.18	0.13	.	6	.	.	-0.1	-0.3	.	.	.	.	0.13	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=RAM-7A

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B
118	25FEB85	12.56	10300	3300	2346	339	0.22	620	650	-5	37.0	36.0	547	1.00	0.5	5.79	0.15
119	25MAR85	12.46	10600	3012	2251	290	0.09	550	650	-5	14.0	31.0	559	0.79	0.6	5.97	0.12
120	13MAY85	12.45	11300	3420	2370	334	0.05	620	640	-5	45.0	45.6	646	9.80	0.5	6.74	0.09
121	30MAY85	12.31	7350	3080	1188	211	0.04	370	620	-5	33.0	29.8	1230	0.14	0.9	2.02	0.20
122	13JUN85	11.36	2710	1580	251	255	0.26	98	180	-5	22.3	12.7	908	-0.02	0.4	0.61	0.14
123	27JUN85	10.61	2070	1490	63	196	20.00	80	182	-5	14.0	14.8	1020	-0.02	0.3	0.64	0.13
124	09JUL85	11.19	2150	1610	80	218	12.00	95	180	-5	14.0	14.7	1030	-0.02	0.3	0.55	0.15
125	23OCT85	12.14	3810	2090	495	338	0.40	149	225	-5	17.0	18.6	1030	-0.02	0.5	1.11	0.09

OBS	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
118	.	10	.	.	.	-0.1	-0.3	.	.	.	.	.	0.70	.	.	.	.
119	.	11	.	.	.	0.3	-0.3	.	.	.	.	.	0.70	.	.	.	.
120	.	13	.	.	.	0.1	-0.3	.	.	.	.	.	1.44	.	.	.	.
121	.	11	.	.	.	0.5	-0.3	.	.	.	.	.	0.78	.	.	.	.
122	.	5	.	.	.	0.2	-0.3	.	.	.	.	.	0.34	.	.	.	.
123	.	4	.	.	.	0.2	-0.3	.	.	.	.	.	0.35	.	.	.	.
124	.	3	.	.	.	0.2	-0.3	.	.	.	.	.	0.31	.	.	.	.
125	-0.05	4	-0.01	-0.01	-0.1	0.2	-0.3	-0.1	-0.01	-0.01	-0.01	-0.01	0.38	-0.01	-0.05	6.5	0.01

STATION=RAM-7B

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B
126	25FEB85	11.59	7020	5490	322	443	-0.01	910	710	-5	40.0	36.0	3350	5.30	1.9	4.92	1.69
127	25MAR85	11.31	6840	5568	285	414	0.07	860	700	-5	10.0	34.0	3390	6.50	2.1	5.13	1.33
128	13MAY85	11.32	6600	5425	203	444	0.09	870	630	-5	25.0	37.6	3417	17.10	1.9	5.65	1.30
129	30MAY85	11.99	6300	3490	688	244	0.13	503	570	-5	56.0	20.1	1740	0.28	1.4	1.70	0.52
130	13JUN85	9.21	2390	1850	45	178	46.00	144	199	10	12.3	11.2	1220	0.02	2.7	0.44	0.41
131	27JUN85	8.75	2450	1930	37	233	30.00	154	198	10	7.0	18.1	1310	-0.02	2.7	0.48	0.49
132	09JUL85	8.75	2510	2040	36	248	28.00	161	206	17	4.0	15.0	1310	-0.02	2.7	0.48	0.50
133	23OCT85	8.85	2620	2270	35	280	21.00	191	229	12	5.0	14.4	1470	-0.02	2.3	0.69	0.57

OBS	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
126	.	8	.	.	.	1.1	-0.3	.	.	.	.	.	1.27	.	.	.	.
127	.	7	.	.	.	1.0	-0.3	.	.	.	.	.	1.30	.	.	.	.
128	.	9	.	.	.	0.2	-0.3	.	.	.	.	.	2.40	.	.	.	.
129	.	10	.	.	.	0.6	-0.3	.	.	.	.	.	1.25	.	.	.	.
130	.	16	.	.	.	0.3	-0.3	.	.	.	.	.	0.44	.	.	.	.
131	.	3	.	.	.	0.4	-0.3	.	.	.	.	.	0.53	.	.	.	.
132	.	2	.	.	.	0.4	-0.3	.	.	.	.	.	0.50	.	.	.	.
133	-0.05	2	-0.01	-0.01	-0.1	0.3	-0.3	-0.1	-0.01	-0.01	-0.01	-0.01	0.49	0.02	-0.05	6.1	0.01

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=RAM-7C

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B
134	25FEB85	10.06	6220	5470	74	475	0.34	840	620	-5	19.00	32.0	3470	3.40	1.8	4.74	2.01
135	25MAR85	9.99	6200	5384	70	449	0.52	820	630	-5	16.00	31.0	3340	1.61	2.3	5.07	1.47
136	13MAY85	9.93	6200	5412	76	474	0.45	830	590	-5	24.00	36.0	3462	13.10	2.2	5.53	1.46
137	30MAY85	8.88	4550	3800	72	306	30.00	520	436	39	13.00	21.2	2340	0.15	2.5	0.77	0.90
138	13JUN85	8.57	2190	1700	58	128	75.00	122	179	45	3.34	11.7	1120	0.02	3.7	0.32	0.43
139	27JUN85	8.65	2340	1860	41	195	52.00	131	189	20	6.00	14.7	1250	-0.02	3.0	0.39	0.47
140	09JUL85	8.59	2330	1870	44	195	53.00	133	192	27	3.00	14.8	1230	-0.02	3.1	0.36	0.47
141	23OCT85	9.02	2520	2170	48	262	28.00	171	221	-5	15.90	14.2	1380	-0.02	3.5	0.55	0.59

OBS	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
134	.	6	.	.	.	0.9	-0.3	.	.	.	.	.	1.30	.	.	.	.
135	.	8	.	.	.	0.9	-0.3	.	.	.	.	.	1.33	.	.	.	.
136	.	11	.	.	.	0.2	-0.3	.	.	.	.	.	2.50	.	.	.	.
137	.	10	.	.	.	0.6	-0.3	.	.	.	.	.	1.50	.	.	.	.
138	.	5	.	.	.	0.3	-0.3	.	.	.	.	.	0.38	.	.	.	.
139	.	2	.	.	.	0.3	-0.3	.	.	.	.	.	0.50	.	.	.	.
140	.	3	.	.	.	0.4	-0.3	.	.	.	.	.	0.46	.	.	.	.
141	-0.05	2	-0.01	-0.01	-0.1	0.3	-0.3	-0.1	-0.01	-0.01	-0.01	-0.01	0.46	0.04	-0.05	5.8	-0.01

STATION=RAM-7G

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B
142	25FEB85	9.08	5950	4690	68	319	13	850	630	21	18.00	39.0	3130	7.10	3.0	7.70	1.97
143	25MAR85	9.07	5810	4903	78	294	14	830	630	26	19.00	45.0	3050	18.20	3.3	8.00	1.45
144	13MAY85	8.89	5900	4822	69	292	12	820	600	32	13.00	36.5	3086	12.90	3.0	7.88	1.50
145	30MAY85	8.79	4580	3720	55	262	16	570	452	24	9.00	21.7	2360	0.05	2.9	1.42	1.08
146	13JUN85	9.13	2520	1930	42	180	35	199	203	11	8.88	15.7	1250	0.40	4.5	1.00	0.56
147	27JUN85	8.77	2300	1760	36	194	33	165	179	17	4.00	15.1	1190	0.02	4.4	0.44	0.53
148	09JUL85	8.66	2320	1820	38	198	35	171	185	20	3.00	15.0	1200	-0.02	4.0	0.50	0.55
149	23OCT85	8.82	2550	2180	43	250	17	206	228	23	5.00	15.7	1390	-0.02	5.3	1.21	0.69

OBS	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
142	.	19	.	.	.	-0.1	-0.3	.	.	.	.	.	1.22	.	.	.	.
143	.	21	.	.	.	-0.1	-0.3	.	.	.	.	.	1.26	.	.	.	.
144	.	30	.	.	.	-0.1	-0.3	.	.	.	.	.	2.20	.	.	.	.
145	.	21	.	.	.	0.2	-0.3	.	.	.	.	.	1.54	.	.	.	.
146	.	9	.	.	.	0.2	-0.3	.	.	.	.	.	0.57	.	.	.	.
147	.	5	.	.	.	0.3	-0.3	.	.	.	.	.	0.55	.	.	.	.
148	.	7	.	.	.	0.3	-0.3	.	.	.	.	.	0.50	.	.	.	.
149	-0.05	11	-0.01	-0.01	-0.1	0.1	-0.3	-0.1	-0.01	-0.01	-0.01	-0.01	0.52	0.05	-0.05	5.4	0.04

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=RET-1-4-4

OBS	DATE	PH	SPC. COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
150	18JUN85	7.68	2020	1530	419	154	101	32	160	481	-1	13.9	795	-0.02	0.7	0.43	0.21	.	19	.	.	.	0.3	-0.3	.	.	.	.	.	0.33	.	.	.	.

STATION=RETORT

OBS	DATE	PH	SPC. COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B
151	15MAY85	8.67	5300	4471	228	312	42	680	540	200.0	24.00	79.4	2450	113.00	3.26	6.04	1.34
152	30MAY85	9.29	2700	2100	51	207	16	264	229	12.8	14.00	19.5	1370	0.82	2.60	0.54	0.66
153	07JUN85	8.34	2420	1880	51	170	27	215	205	38.6	1.09	22.9	1200	3.83	3.30	0.81	0.62
154	010CT85	7.31	2730	2280	40	310	12	216	235	26.8	-1.00	15.2	1460	-0.02	4.10	0.87	0.72

OBS	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
151	0.33	15	-0.01	-0.01	-0.1	-0.1	-0.3	-0.1	-0.01	-0.01	0.01	-0.01	2.22	0.18	-0.05	8.20	0.11
152	0.05	10	-0.01	-0.01	-0.1	0.2	-0.3	0.1	-0.01	-0.01	-0.01	-0.01	0.87	0.02	-0.05	4.55	0.04
153	-0.05	12	-0.01	-0.01	-0.1	0.1	-0.3	-0.1	-0.01	-0.01	0.07	-0.01	0.60	-0.01	-0.05	4.20	0.01
154	.	11	.	.	.	0.2	-0.3	.	.	.	.	.	0.55	.	.	.	.

STATION=RW-5

OBS	DATE	PH	SPC. COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
155	05DEC85	7.62	2320	.	200	160	98	65	207	218	-1	19	1130	.	.	0.31	.	.	.	.	.	.	0.2	-0.3	.	.	.	.	.	0.32	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=RW-6

OBS	DATE	FH	SPC-COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	DFE	OAC	SSE	EV	MOL	H G	ALE	ABR	CCU	PB	L I	MNI	NSR	ZN
156	05DEC85	7.71	2460	.	141	190	83	98	218	150	-1	18	1250	.	.	0.4	.	.	.	.	.	0.2	-0.3	.	.	.	.	0.35	.	.	.

STATION=YBOXFL

OBS	DATE	FH	SPC-COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	DFE	OAC	SSE	EV	MOL	H G	ALE	ABR	CCU	PB	L I	MNI	NSR	ZN
157	16JAN85	7.9	1580	1127	484	87	84	1.28	162	577	-1	12.7	441	-0.02	0.5	-0.05	0.17	.	2	.	.	-0.1	-0.3	.	.	.	.	0.04	.	.	.

STATION=YCOFL

OBS	DATE	FH	SPC-COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	DFE	OAC	SSE	EV	MOL	H G	ALE	ABR	CCU	PB	L I	MNI	NSR	ZN
158	16JAN85	8.06	1930	1408	511	94	96	1.05	210	598	-1	22	598	0.02	0.3	-0.05	0.31	.	6	.	.	-0.1	-0.3	.	.	.	.	0.02	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=YCOINJ

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B
159	15MAY85	7.77	2620	2299	478	243	181	1.65	179	551	-1	12.7	1290	-0.02	0.77	0.83	0.17
160	30MAY85	7.36	2160	1770	505	197	124	0.67	159	584	-1	12.9	871	-0.02	0.70	0.18	0.13

OBS	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
159	4.13	9	-0.01	-0.01	-0.1	0.1	-0.3	-0.1	-0.01	-0.01	0.02	-0.01	0.46	0.24	-0.05	8.20	0.03
160	3.92	5	0.02	-0.01	-0.1	0.2	-0.3	0.1	-0.01	-0.01	-0.01	-0.01	0.32	0.07	-0.05	8.08	0.04

STATION=YMET3

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
161	16JAN85	7.98	1700	1215	486	87	88	1.19	176	568	-1	15.9	493	-0.02	0.40	-0.05	0.23	.	3	.	.	.	-0.1	-0.3	.	.	.	.	.	0.05	.	.	.	.
162	06NOV85	8.24	1620	1180	456	103	90	2.21	161	525	-1	15.5	470	-0.02	0.25	-0.05	0.11	.	13	.	.	.	-0.1	-0.3	.	.	.	.	.	0.05	.	.	.	.

STATION=YSEOFL

OBS	DATE	PH	SPC_COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FE	DOC	AS	SE	V	MOL	HG	AL	BE	CR	CU	PB	LI	MN	NI	SR	ZN
163	16JAN85	7.91	2270	1754	557	143	120	1.95	230	652	-1	25.0	776	-0.02	0.30	-0.05	0.27	.	7	.	.	.	-0.1	-0.3	.	.	.	.	.	0.03	.	.	.	.
164	06NOV85	8.12	2040	1530	501	117	118	1.88	223	581	-1	20.8	689	-0.02	0.41	0.06	0.20	.	14	.	.	.	-0.1	-0.3	.	.	.	.	.	0.05	.	.	.	.

RIO BLANCO OIL SHALE COMPANY
ENVIRONMENTAL HYDROLOGY MONITORING PROGRAM
BASIC AND TRACE WATER CHEMISTRY DATA - TRACT C-A

STATION=YUPCO

OBS	DATE	PH	SPC-COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FEC	DOC	AS	SEV	MOL	HG	AL	B	E	R	C	U	C	F	B	L	I	M	N	I	S	R	Z	N
165	06NOV85	8.05	1600	1250	326	123	88	1.14	128	367	-1	22.9	551	-0.02	0.27	-0.05	0.06	.	14	.	.	.	-0.1	-0.3	.	.	.	.	.	.	.	.	0.05	.	.	.	.	.	.	.	.

STATION=YYELCR

OBS	DATE	PH	SPC-COND	TDS	ALK	CA	MG	K	NA	HCO3	CO3	CL	SO4	S	F	NH3	B	FEC	DOC	AS	SEV	MOL	HG	AL	B	E	R	C	U	C	F	B	L	I	M	N	I	S	R	Z	N
166	10MAY85	8.37	2540	1890	564	102	142	3.0	300	636	9.00	40.7	879	-0.02	0.5	0.14	0.19	.	13	.	.	.	-0.1	-0.3	.	.	.	.	.	.	.	.	0.17	.	.	.	.	.	.	.	.
167	30MAY85	8.48	2730	2080	598	105	158	3.2	342	661	16.00	44.3	1070	-0.02	0.6	0.12	0.21	.	14	.	.	.	0.1	-0.3	.	.	.	.	.	.	.	.	0.20	.	.	.	.	.	.	.	.
168	13JUN85	8.39	3030	2200	606	91	175	3.0	385	689	7.08	47.5	1120	-0.02	0.7	-0.05	0.23	.	23	.	.	.	0.1	-0.3	.	.	.	.	.	.	.	.	0.15	.	.	.	.	.	.	.	.

APPENDIX 6-O

Special Studies/Ecological Interrelationships

APPENDIX 6-1

Experimental Revegetation Data and Analyses

APPENDIX 6-1.1

Plot R-1 Experimental Revegetation Data

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	0	8	9	4.3
LINUM LEWISII	14	18	7	18	14.3
MELILOTUS OFFICINALIS	0	5	0	0	1.3
SPHAERALCEA COCCINEA	1	0	0	0	0.3
SUBTOTAL					20.0
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	0	1	0	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	30	25	20	15	22.5
STIPA VIRIDULA	3	0	0	0	0.8
SUBTOTAL					23.3
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	4	0	1.3
BROMUS TECTORUM	0	3	0	0	0.8
SITANION HYSTRIX	0	0	0	5	1.3
SUBTOTAL					3.3
SHRUB - PLANTED					
CERATOIDES LANATA	2	0	2	0	1.0
CHRYSOTHAMNUS NAUSEOSUS	0	0	11	10	5.3
SUBTOTAL					6.3
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	0	3	0	0.8
SUBTOTAL					0.8
TOTAL PLANTED SPECIES					49.3
TOTAL INVADED SPECIES					5.0
GRAND TOTAL					55.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
LINUM LEWISII	10	10	15	10	11.3
MELILOTUS OFFICINALIS	2	2	0	8	[illegible]
SUBTOTAL					14.3
FORB - INVADED					
IPOMOPSIS AGGREGATA	1	1	0	0	[illegible]
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	25	8	7	12	13.0
SUBTOTAL					13.0
GRASS - INVADED					
BROMUS TECTORUM	0	0	0	3	0.8
SUBTOTAL					0.8
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	2	0	2	1.0
CERATOIDES LANATA	0	0	2	4	1.5
CHRYSOTHAMNUS NAUSEOSUS	3	2	0	1	1.5
SUBTOTAL					4.0
TOTAL PLANTED SPECIES					[illegible]
TOTAL INVADED SPECIES					[illegible]
GRAND TOTAL					[illegible]

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
LINUM LEWISII	1	3	0	0	1.0
MELILOTUS OFFICINALIS	10	25	4	2	10.3
SPHAERALCEA COCCINEA	1	0	0	0	0.3
SUBTOTAL					11.5
FORB - INVADED					
CRYPTANTHA SERICEA	1	0	0	0	0.3
IPOMOPSIS AGGREGATA	0	0	0	1	0.3
MACHAERANTHERA PATTERSONII	1	1	1	1	1.0
SUBTOTAL					1.5
GRASS - PLANTED					
AGROPYRON SPECIES	12	10	12	15	12.3
SUBTOTAL					12.3
GRASS - INVADED					
BROMUS TECTORUM	0	1	10	1	3.0
SUBTOTAL					3.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	2	0	0	4	1.5
CHRYSOTHAMNUS NAUSEOSUS	1	10	0	2	3.3
SUBTOTAL					4.8
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	0	0	1	0.3
SUBTOTAL					0.3
TOTAL PLANTED SPECIES					28.5
TOTAL INVADED SPECIES					4.8
GRAND TOTAL					33.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
LINUM LEWISII	0	8	2	5	3.8
MELILOTUS OFFICINALIS	25	18	2	3	12.0
SUBTOTAL					15.8
GRASS - PLANTED					
AGROPYRON SPECIES	40	10	25	30	26.3
SUBTOTAL					26.3
GRASS - INVADED					
AGROPYRON CRISTATUM	0	7	3	5	3.8
BROMUS TECTORUM	4	2	3	0	2.3
KOELERIA MACRANTHA	0	0	3	0	0.8
SITANION HYSTRIX	3	0	0	0	0.8
SUBTOTAL					7.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	2	2	4	0	2.0
CERATOIDES LANATA	0	0	1	1	0.5
CHRYSOTHAMNUS NAUSEOSUS	0	8	3	0	2.8
SUBTOTAL					5.1
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	0	3	0	0.8
SUBTOTAL					0.8
TOTAL PLANTED SPECIES					47.3
TOTAL INVADED SPECIES					8.3
GRAND TOTAL					55.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	1	1	0	0.8
LINUM LEWISII	7	12	20	13	12.0
MELILOTUS OFFICINALIS	6	10	8	15	9.8
SUBTOTAL					23.5
FORB - INVADED					
UNKNOWN FORB	0	0	0	1	0.3
SUBTOTAL					0.7
GRASS - PLANTED					
AGROPYRON SPECIES	10	5	9	8	8.0
SUBTOTAL					8.0
GRASS - INVADED					
AGROPYRON CRISTATUM	0	10	0	0	2.5
BROMUS TECTORUM	0	0	1	2	0.8
SUBTOTAL					3.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	2	2	1	1.3
CERATOIDES LANATA	2	1	0	2	1.3
CHRYSOTHAMNUS NAUSEOSUS	3	20	0	0	5.8
SUBTOTAL					8.3
TOTAL PLANTED SPECIES					39.8
TOTAL INVADED SPECIES					3.5
GRAND TOTAL					43.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	10	0	4	0	3.5
LINUM LEWISII	12	8	4	10	8.5
MELILOTUS OFFICINALIS	5	8	4	7	6.0
SUBTOTAL					18.0
FORB - INVADED					
ERIOGONUM ALATUM	0	2	0	1	0.8
HAPLOPAPPUS NUTTALLII	0	2	0	1	0.8
IPOMOPSIS AGGREGATA	0	1	0	0	0.3
SENECIO MULTILOBATUS	1	0	0	0	0.3
SUBTOTAL					2.0
GRASS - PLANTED					
AGROPYRON SPECIES	18	5	12	15	12.5
SUBTOTAL					12.5
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	0	3	0.8
BROMUS TECTORUM	0	0	8	5	3.3
SITANION HYSTRIX	0	0	5	0	1.3
SUBTOTAL					5.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	12	0	0	3.0
CHRYSOTHAMNUS NAUSEOSUS	7	2	2	0	2.8
SUBTOTAL					5.8
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	0	1	0	0.3
SUBTOTAL					0.3
TOTAL PLANTED SPECIES					36.3
TOTAL INVADED SPECIES					7.5
GRAND TOTAL					43.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	0	8	5	3.3
LINUM LEWISII	3	18	7	3	9.0
SUBTOTAL					12.3
GRASS - PLANTED					
AGROPYRON SPECIES	55	35	20	30	35.0
STIPA VIRIDULA	0	0	12	0	3.0
SUBTOTAL					38.0
GRASS - INVADED					
AGROPYRON CRISTATUM	0	2	0	4	1.5
SUBTOTAL					1.5
SHRUB - PLANTED					
CERATOIDES LANATA	3	2	0	0	1.3
CERCOCARPUS MONTANUS	1	0	0	0	0.3
CHRYSOTHAMNUS NAUSEOSUS	4	2	10	0	4.0
PURSHIA TRIDENTATA	9	0	0	0	2.3
SUBTOTAL					7.8
TOTAL PLANTED SPECIES					58.0
TOTAL INVADED SPECIES					1.5
GRAND TOTAL					59.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	2	0	1	1.0
LINUM LEWISII	3	3	2	8	4.0
MELILOTUS OFFICINALIS	2	8	2	4	4.0
SUBTOTAL					9.0
FORB - INVADED					
IPOMOPSIS AGGREGATA	2	1	0	0	0.8
SENECIO MULTILOBATUS	1	1	1	1	1.0
SUBTOTAL					1.8
GRASS - PLANTED					
AGROPYRON SPECIES	10	8	8	18	11.0
STIPA VIRIDULA	0	0	0	3	0.8
SUBTOTAL					11.8
SHRUB - PLANTED					
CERATOIDES LANATA	1	1	1	0	0.8
CHRYSOTHAMNUS NAUSEOSUS	1	7	0	4	3.0
SUBTOTAL					3.8
TOTAL PLANTED SPECIES					24.5
TOTAL INVADED SPECIES					1.8
GRAND TOTAL					26.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	12	0	0	1	3.3
LINUM LEWISII	10	3	13	10	9.0
MELILOTUS OFFICINALIS	2	12	0	8	5.5
SUBTOTAL					17.8
FORB - INVADED					
HAPLOPAPPUS NUTTALLII	0	1	0	0	0.3
MACHAERANTHERA PATTERSONII	0	0	0	2	0.5
PHYSARIA FLORIBUNDA	0	0	1	0	0.3
SENECIO MULTILOBATUS	0	1	0	0	0.3
TRAGOPOGON SPECIES	1	0	0	0	0.3
SUBTOTAL					1.5
GRASS - PLANTED					
AGROPYRON SPECIES	12	18	25	15	17.5
SUBTOTAL					17.5
GRASS - INVADED					
BROMUS TECTORUM	3	2	1	0	1.5
SUBTOTAL					1.5
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	14	1	0	15	7.5
CHRYSOTHAMNUS VISCIDIFLORUS	0	0	0	1	0.3
PURSHIA TRIDENTATA	0	0	1	0	0.3
SUBTOTAL					8.1
TOTAL PLANTED SPECIES					43.3
TOTAL INVADED SPECIES					3.0
GRAND TOTAL					46.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT 3-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	25	30	2	0	14.3
LINUM LEWISII	20	15	9	5	12.3
MELILOTUS OFFICINALIS	3	0	3	2	2.0
SUBTOTAL					28.5
FORB - INVADED					
CRYPTANTHA SERICEA	0	0	1	0	0.3
ERIOGONUM ALATUM	0	0	1	0	0.3
IPOMOPSIS AGGREGATA	0	0	1	0	0.3
MACHAERANTHERA PATTERSONII	0	0	0	1	0.3
SENECIO MULTILOBATUS	1	0	0	0	0.3
SUBTOTAL					1.3
GRASS - PLANTED					
AGROPYRON SPECIES	20	3	25	25	18.3
ORYZOPSIS HYMENOIDES	2	0	0	0	0.5
SUBTOTAL					18.8
GRASS - INVADED					
BROMUS TECTORUM	3	0	0	0	0.8
KOELERIA MACRANTHA	2	0	0	0	0.5
SUBTOTAL					1.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	0	3	0.8
CERATOIDES LANATA	0	0	3	0	0.8
CHRYSOTHAMNUS NAUSEOSUS	1	18	1	5	6.3
SUBTOTAL					7.8
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	0	0	6	1.5
SUBTOTAL					1.5
TOTAL PLANTED SPECIES					55.0
TOTAL INVADED SPECIES					4.0
GRAND TOTAL					59.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	3	4	0	0	1.8
LINUM LEWISII	2	0	1	8	2.8
MELILOTUS OFFICINALIS	1	6	10	6	5.3
SUBTOTAL					10.1
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	0	1	0	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	10	12	14	6	10.5
SUBTOTAL					10.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	1	0	0	9	0.3
CERATOIDES LANATA	0	0	0	3	0.8
CHRYSOTHAMNUS NAUSEOSUS	10	3	2	1	4.1
SUBTOTAL					5.3
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	2	0	0	0	0.5
SUBTOTAL					0.5
TOTAL PLANTED SPECIES					25.9
TOTAL INVADED SPECIES					0.8
GRAND TOTAL					26.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS				TREATMENT PLOT AVERAGE
	#5	#6	#7	#8	
FORB - PLANTED					
LINUM LEWISII	6	12	3	10	7.9
MELILOTUS OFFICINALIS	3	2	8	3	4.1
SUBTOTAL					11.1
FORB - INVADED					
MACHAERANTHERA PATTERSONII	0	0	9	1	2.5
SUBTOTAL					2.5
GRASS - PLANTED					
AGROPYRON SPECIES	8	8	14	13	10.2
SUBTOTAL					10.2
GRASS - INVADED					
BROMUS TECTORUM	3	0	0	9	0.5
KOELERIA CRISTATA	0	0	0	1	0.2
SUBTOTAL					1.0
SHRUB - PLANTED					
ATRIPLEX CANESCENS	2	0	0	0	0.5
CERATOIDES LANATA	0	0	0	1	0.2
CHRYSOTHAMNUS NAUSEOSUS	1	0	29	7	7.0
SUBTOTAL					7.7
TOTAL PLANTED SPECIES					28.9
TOTAL INVADED SPECIES					3.5
GRAND TOTAL					32.4

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT 8-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
LINUM LEWISII	7	4	6	15	8.0
MELILOTUS OFFICINALIS	0	0	2	1	0.8
SUBTOTAL					8.8
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	0	1	0	0.3
MACHAERANTHERA PATTERSONII	1	0	0	0	0.3
SENECIO MULTILOBATUS	0	0	1	1	0.5
SUBTOTAL					1.0
GRASS - PLANTED					
AGROPYRON SPECIES	18	20	25	18	20.3
SUBTOTAL					20.3
GRASS - INVADED					
BROMUS TECTORUM	0	0	0	5	1.3
SITANION HYSTRIX	0	0	0	1	0.3
SUBTOTAL					1.5
SHRUB - PLANTED					
CERATOIDES LANATA	1	0	3	0	1.0
CERCOCARPUS MONTANUS	0	3	0	0	0.8
CHRYSOTHAMNUS NAUSEOSUS	0	3	5	3	2.8
PURSHIA TRIDENTATA	1	0	0	0	0.3
SUBTOTAL					4.8
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	2	0	0	0	0.5
SUBTOTAL					0.5
TOTAL PLANTED SPECIES					33.9
TOTAL INVADED SPECIES					3.0
GRAND TOTAL					36.9

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT P-1
REPORT YEAR= 1995

BLOCK=2 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	0	0	3	0.8
LINUM LEWISII	10	14	15	2	10.1
MELILOTUS OFFICINALIS	2	1	2	5	2.8
PENSTEMON STRICTUS	0	3	0	0	0.9
SUBTOTAL					14.5
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	0	1	0	0.3
SENECIO MULTILOBATUS	1	1	0	1	0.8
SUBTOTAL					1.0
GRASS - PLANTED					
AGROPYRON SPECIES	5	15	10	10	10.0
SUBTOTAL					10.0
GRASS - INVADED					
AGROPYRON CRISTATUM	3	0	6	1	2.5
BROMUS TECTORUM	1	4	0	1	1.5
SUBTOTAL					3.7
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	2	0	0	0	0.5
CHRYSOTHAMNUS NAUSEOSUS	0	0	0	12	3.0
SUBTOTAL					3.5
TOTAL PLANTED SPECIES					28.0
TOTAL INVADED SPECIES					7.3
GRAND TOTAL					31.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	2	10	14	0	1.5
LINUM LEWISII	7	10	8	20	11.7
MELILOTUS OFFICINALIS	3	0	3	0	2.5
SUBTOTAL					20.5
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	1	1	1	0.5
PHYSARIA FLORIBUNDA	3	0	0	1	0.3
SENECIO MULTILOBATUS	0	0	3	1	1..
SUBTOTAL					2.0
GRASS - PLANTED					
AGROPYRON SPECIES	16	25	15	8	16.0
SUBTOTAL					16.0
GRASS - INVADED					
AGROPYRON CRISTATUM	1	0	0	0	0.3
BROMUS TECTORUM	0	0	2	0	0.5
SUBTOTAL					0.8
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	2	7	5	0	3.3
CERATOIDES LANATA	0	0	1	0	0.3
CHRYSOTHAMNUS NAUSEOSUS	5	0	0	0	1.3
PURSHIA TRIDENTATA	0	0	0	2	0.5
SUBTOTAL					5.0
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	0	1	0	0.3
SUBTOTAL					0.3
TOTAL PLANTED SPECIES					44.5
TOTAL INVADED SPECIES					2.3
GRAND TOTAL					47.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT P-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	11	4	0	0	[illegible]
LINUM LEWISII	15	14	5	3	[illegible]
MELILOTUS OFFICINALIS	0	0	0	2	[illegible]
SPHAERALCEA COCCINEA	0	0	0	1	[illegible]
SUBTOTAL					[illegible]
FORB - INVADED					
CHAENACTIS DOUGLASII	0	1	0	0	[illegible]
COMANDRA UMBELLATA	0	0	10	0	[illegible]
ERIOGONUM ALATUM	0	1	0	0	[illegible]
HAPLOPAPPUS NUTTALLII	1	0	1	1	[illegible]
MACHAERANTHERA PATTERSONII	0	1	0	0	[illegible]
PHYSARIA FLORIBUNDA	1	0	0	0	[illegible]
SENECIO MULTILOBATUS	0	2	2	0	[illegible]
SUBTOTAL					[illegible]
GRASS - PLANTED					
AGROPYRON SPECIES	10	8	22	15	[illegible]
ORYZOPSIS HYMENOIDES	0	2	4	0	[illegible]
SUBTOTAL					[illegible]
GRASS - INVADED					
BROMUS TECTORUM	0	2	1	0	[illegible]
KOELERIA MACRANTHA	0	2	3	0	[illegible]
SUBTOTAL					[illegible]
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	0	1	[illegible]
CHRYSOTHAMNUS NAUSEOSUS	3	6	4	5	[illegible]
PURSHIA TRIDENTATA	0	0	9	0	[illegible]
SUBTOTAL					[illegible]
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	0	0	1	[illegible]
SUBTOTAL					[illegible]
TOTAL PLANTED SPECIES					[illegible]
TOTAL INVADED SPECIES					[illegible]
GRAND TOTAL					[illegible]

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	12	0	0	3	3.8
LINUM LEWISII	4	0	3	5	3.0
MELILOTUS OFFICINALIS	2	2	4	1	2.3
SUBTOTAL					9.0
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	1	0	0	0.3
MACHAERANTHERA PATTERSONII	0	0	1	1	0.5
SUBTOTAL					0.8
GRASS - PLANTED					
AGROPYRON SPECIES	5	15	6	12	9.5
SUBTOTAL					9.5
GRASS - INVADED					
BROMUS TECTORUM	0	1	0	0	0.3
SITANION HYSTRIX	0	0	2	2	1.1
SUBTOTAL					1.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	10	0	2.5
CERATOIDES LANATA	0	0	0	1	0.3
CHRYSOTHAMNUS NAUSEOSUS	2	12	4	6	6.0
CHRYSOTHAMNUS VISCIDIFLORUS	0	0	7	0	1.8
SUBTOTAL					10.5
TOTAL PLANTED SPECIES					29.0
TOTAL INVADED SPECIES					2.3
GRAND TOTAL					31.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1995

BLOCK=3 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	15	0	0	4.0
LINUM LEWISII	3	8	20	40	17.3
MELILOTUS OFFICINALIS	8	1	0	0	2.3
SPHAERALCEA COCCINEA	1	0	0	0	0.3
SUBTOTAL					24.0
FORB - INVADED					
ARENARIA FENDLERI	1	0	0	0	0.3
IPOMOPSIS AGGREGATA	1	0	0	0	0.3
MACHAERANTHERA PATTERSONII	1	0	0	0	0.3
PHYSARIA FLORIBUNDA	0	0	0	1	0.3
SENECIO MULTILOBATUS	1	0	0	1	0.5
SUBTOTAL					1.5
GRASS - PLANTED					
AGROPYRON SPECIES	5	15	7	12	9.8
ORYZOPSIS HYMENOIDES	0	1	0	0	0.3
STIPA VIRIDULA	0	0	0	3	0.8
SUBTOTAL					10.9
GRASS - INVADED					
BROMUS TECTORUM	0	0	5	0	1.3
KOELERIA MACRANTHA	8	3	3	5	4.8
SUBTOTAL					6.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	9	0	0	0	2.3
CHRYSOTHAMNUS NAUSEOSUS	1	3	5	0	2.3
CHRYSOTHAMNUS VISCIDIFLORUS	0	3	0	0	0.8
SUBTOTAL					5.4
TOTAL PLANTED SPECIES					40.8
TOTAL INVADED SPECIES					7.5
GRAND TOTAL					47.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	2	0	8	1	2.7
LINUM LEWISII	0	13	3	2	4.5
MELILOTUS OFFICINALIS	5	5	0	3	3.3
SPHAERALCEA COCCINEA	0	2	0	1	0.8
SUBTOTAL					11.3
GRASS - PLANTED					
AGROPYRON SPECIES	5	10	45	55	28.8
STIPA VIRIDULA	4	4	0	0	2.0
SUBTOTAL					30.8
GRASS - INVADED					
BROMUS TECTORUM	10	10	0	0	5.0
KOELERIA MACRANTHA	0	5	0	0	1.7
SITANION HYSTRIX	0	18	0	0	4.5
SUBTOTAL					10.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	28	0	3	15	11.3
CHRYSOTHAMNUS NAUSEOSUS	0	0	0	1	0.3
CHRYSOTHAMNUS VISCIDIFLORUS	0	5	0	0	1.5
PURSHIA TRIDENTATA	0	0	5	0	1.3
SUBTOTAL					14.3
TOTAL PLANTED SPECIES					57.1
TOTAL INVADED SPECIES					10.3
GRAND TOTAL					68.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT B-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
LINUM LEWISII	4	4	7	10	6.3
MELILOTUS OFFICINALIS	8	3	2	9	5.5
SUBTOTAL					11.8
FORB - INVADED					
PHYSARIA FLORIBUNDA	0	1	0	0	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	25	20	15	15	18.8
ELYMUS CINEREUS	0	0	2	0	0.5
SUBTOTAL					19.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	1	0	0	0	0.3
CERATOIDES LANATA	2	0	3	0	1.3
CHRYSOTHAMNUS NAUSEOSUS	10	3	1	0	3.5
PURSHIA TRIDENTATA	0	0	0	3	0.8
SUBTOTAL					5.9
TOTAL PLANTED SPECIES					36.2
TOTAL INVADED SPECIES					0.3
GRAND TOTAL					37.6

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT P-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	0	0	4	1.0
LINUM LEWISII	5	1	18	4	7.0
MELILOTUS OFFICINALIS	0	0	2	2	1.0
SUBTOTAL					9.0
FORB - INVADED					
HAPLOPAPPUS NUTTALLII	0	1	1	0	0.5
IPOMOPSIS AGGREGATA	2	0	0	0	0.5
SENECIO MULTILOBATUS	0	1	0	0	0.3
SUBTOTAL					1.3
GRASS - PLANTED					
AGROPYRON SPECIES	15	7	4	3	7.3
STIPA VIRIDULA	0	1	0	0	0.3
SUBTOTAL					7.5
GRASS - INVADED					
BROMUS TECTORUM	12	3	2	0	4.3
SUBTOTAL					4.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	6	2	25	8.3
CERATOIDES LANATA	3	0	0	3	2.3
CHRYSOTHAMNUS NAUSEOSUS	18	1	1	0	5.0
CHRYSOTHAMNUS VISCIDIFLORUS	0	2	0	3	1.3
SUBTOTAL					17.0
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	1	0	3	1.0
SUBTOTAL					1.0
TOTAL PLANTED SPECIES					33.3
TOTAL INVADED SPECIES					7.3
GRAND TOTAL					40.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	0	0	6	1.5
LINUM LEWISII	0	8	4	18	7.5
MELILOTUS OFFICINALIS	3	4	6	2	3.8
SUBTOTAL					12.8
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	2	0	0	0.5
PHYSARIA FLORIBUNDA	0	0	0	1	0.3
TRAGOPOGON SPECIES	0	0	1	0	0.3
SUBTOTAL					1.0
GRASS - PLANTED					
AGROPYRON SPECIES	35	10	15	15	18.8
SUBTOTAL					18.8
GRASS - INVADED					
AGROPYRON CRISTATUM	0	18	0	2	5.0
BROMUS TECTORUM	2	0	0	0	0.5
KOELERIA MACRANTHA	0	0	8	8	4.0
POA SPECIES	0	0	5	0	1.3
SUBTOTAL					10.8
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	0	1	0.3
CHRYSOTHAMNUS NAUSEOSUS	0	12	0	1	3.3
SUBTOTAL					3.5
TOTAL PLANTED SPECIES					35.0
TOTAL INVADED SPECIES					11.8
GRAND TOTAL					46.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	0	0	0	0.3
LINUM LEWISII	10	5	7	10	8.0
MELILOTUS OFFICINALIS	5	12	1	1	4.8
SUBTOTAL					13.0
FORB - INVADED					
MACHAERANTHERA PATTERSONII	0	1	0	3	1.0
SUBTOTAL					1.0
GRASS - PLANTED					
AGROPYRON SPECIES	10	3	15	5	9.5
STIPA VIRIDULA	0	0	3	2	1.3
SUBTOTAL					10.8
GRASS - INVADED					
BROMUS TECTORUM	0	0	8	10	4.5
SUBTOTAL					4.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	2	2	2	1.5
ATRIPLEX CANESCENS	0	3	0	0	0.8
CERATOIDES LANATA	1	0	0	0	0.3
CHRYSOTHAMNUS NAUSEOSUS	4	18	0	14	9.0
SUBTOTAL					11.5
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	3	0	0	0	0.8
SUBTOTAL					0.8
TOTAL PLANTED SPECIES					35.3
TOTAL INVADED SPECIES					1.8
GRAND TOTAL					41.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1995

BLOCK=3 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	3	0	3	1.8
LINUM LEWISII	3	5	8	4	5.0
MELILOTUS OFFICINALIS	5	2	4	1	3.0
SUBTOTAL					9.8
FORB - INVADED					
CHAENACTIS DOUGLASII	0	1	0	0	0.3
MACHAERANTHERA PATTERSONII	0	1	0	0	0.3
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	8	12	5	10	8.8
SUBTOTAL					8.8
GRASS - INVADED					
BROMUS TECTORUM	5	0	0	0	1.3
SUBTOTAL					1.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	4	0	0	0	1.0
CERATOIDES LANATA	0	1	2	0	0.8
CHRYSOTHAMNUS NAUSEOSUS	0	3	1	2	1.5
SUBTOTAL					3.3
TOTAL PLANTED SPECIES					21.5
TOTAL INVADED SPECIES					1.8
GRAND TOTAL					23.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	0	20	0	5.0
LINUM LEWISII	5	12	10	5	8.0
MELILOTUS OFFICINALIS	0	2	0	3	2.5
SUBTOTAL					15.5
FORB - INVADED					
COMANDRA UMBELLATA	0	0	0	2	0.5
HAPLOPAPPUS NUTTALLII	0	1	0	2	0.8
SENECIO MULTILOBATUS	0	0	1	0	0.1
SUBTOTAL					1.5
GRASS - PLANTED					
AGROPYRON SPECIES	35	35	12	10	23.0
SUBTOTAL					23.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	4	10	3.5
CHRYSOTHAMNUS NAUSEOSUS	3	3	0	0	1.5
SUBTOTAL					5.0
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	0	2	0	0.5
SUBTOTAL					0.5
TOTAL PLANTED SPECIES					43.5
TOTAL INVADED SPECIES					2.0
GRAND TOTAL					45.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
LINUM LEWISII	8	4	3	8	5.3
MELILOTUS OFFICINALIS	4	10	3	5	5.5
SUBTOTAL					11.3
FORB - INVADED					
CHAENACTIS DOUGLASII	0	1	0	0	0.3
MACHAERANTHERA PATTERSONII	0	1	0	1	0.5
SUBTOTAL					0.8
GRASS - PLANTED					
AGROPYRON SPECIES	10	10	14	3	10.0
SUBTOTAL					10.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	20	4	5	15	11.0
CHRYSOTHAMNUS VISCIDIFLORUS	0	0	3	0	0.3
SUBTOTAL					11.3
TOTAL PLANTED SPECIES					33.6
TOTAL INVADED SPECIES					0.8
GRAND TOTAL					33.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	5	0	0	12	4.3
LINUM LEWISII	8	2	7	4	5.3
MELILOTUS OFFICINALIS	4	0	2	1	1.8
SUBTOTAL					11.3
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	0	0	1	0.3
MACHAERANTHERA PATTERSONII	0	0	1	0	0.3
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	15	20	12	10	14.3
SUBTOTAL					14.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	1	0	0	0.3
CERATOIDES LANATA	3	0	2	0	1.1
CHRYSOTHAMNUS NAUSEOSUS	2	5	4	2	3.3
PURSHIA TRIDENTATA	0	4	8	2	3.5
SUBTOTAL					8.3
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	1	1	0	0.5
SUBTOTAL					0.7
TOTAL PLANTED SPECIES					33.9
TOTAL INVADED SPECIES					1.2
GRAND TOTAL					34.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	5	12	45	15	19.3
LINUM LEWISII	6	3	2	12	7.0
SUBTOTAL					26.3
FORB - INVADED					
HAPLOPAPPUS NUTTALLII	1	0	0	1	0.5
IPOMOPSIS AGGREGATA	0	0	1	0	0.3
TRAGOPOGON SPECIES	0	1	0	0	0.3
SUBTOTAL					1.0
GRASS - PLANTED					
AGROPYRON SPECIES	10	8	10	15	10.8
STIPA VIRIDULA	0	2	0	0	0.5
SUBTOTAL					11.3
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	3	0	0.8
BROMUS TECTORUM	2	0	1	0	0.8
KOELERIA MACRANTHA	0	0	5	5	2.5
POA SPECIES	0	3	0	0	0.9
SUBTOTAL					4.8
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	18	3	0	0	5.3
CERATOIDES LANATA	0	0	1	0	0.3
CHRYSOTHAMNUS NAUSEOSUS	6	0	5	0	2.8
PURSHIA TRIDENTATA	0	0	2	4	1.5
SUBTOTAL					9.8
TOTAL PLANTED SPECIES					47.3
TOTAL INVADED SPECIES					5.8
GRAND TOTAL					53.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	2	2	4	3	3.3
LINUM LEWISII	6	9	12	6	8.3
MELILOTUS OFFICINALIS	6	1	0	3	2.5
SUBTOTAL					13.5
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	0	0	3	0.8
SENECIO MULTILOBATUS	0	0	1	1	0.5
SUBTOTAL					1.3
GRASS - PLANTED					
AGROPYRON SPECIES	20	25	12	12	17.1
SUBTOTAL					17.5
GRASS - INVADED					
BROMUS TECTORUM	0	2	0	0	2.8
SUBTOTAL					2.8
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	3	0	[illegible]
CHRYSOTHAMNUS NAUSEOSUS	3	8	0	0	[illegible]
SUBTOTAL					[illegible]
TOTAL PLANTED SPECIES					[illegible]
TOTAL INVADED SPECIES					[illegible]
GRAND TOTAL					[illegible]

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	1	3	3	1.8
LINUM LEWISII	8	6	8	9	7.9
SPHAERALCEA COCCINEA	0	0	1	0	0.3
SUBTOTAL					9.0
FORB - INVADED					
HAPLOPAPPUS NUTTALLII	0	1	1	1	0.9
IPOMOPSIS AGGREGATA	1	1	0	0	0.5
MACHAERANTHERA PATTERSONII	1	0	0	1	0.5
PHYSARIA FLORIBUNDA	0	1	1	0	0.5
SENECIO MULTILOBATUS	0	0	0	1	0.3
TRAGOPOGON SPECIES	0	1	0	0	0.3
SUBTOTAL					2.8
GRASS - PLANTED					
AGROPYRON SPECIES	16	10	12	7	11.3
ORYZOPSIS HYMENOIDES	0	0	1	0	0.3
SUBTOTAL					11.5
GRASS - INVADED					
BROMUS TECTORUM	1	0	0	0	0.3
SUBTOTAL					0.3
SHRUB - PLANTED					
CERATOIDES LANATA	0	0	0	2	0.5
CHRYSOTHAMNUS NAUSEOSUS	5	29	4	0	7.3
SUBTOTAL					7.8
TOTAL PLANTED SPECIES					28.3
TOTAL INVADED SPECIES					3.0
GRAND TOTAL					31.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	0	0	2	0.5
LINUM LEWISII	12	14	9	6	10.3
MELILOTUS OFFICINALIS	2	3	0	2	1.8
PENSTEMON STRICTUS	0	0	0	1	0.3
SUBTOTAL					13.0
FORB - INVADED					
ARENARIA FENDLERI	2	0	0	0	0.5
CHAENACTIS DOUGLASII	0	1	0	0	0.3
HAPLOPAPPUS NUTTALLII	0	5	7	0	3.0
IPOMOPSIS AGGREGATA	0	0	0	1	0.3
MACHAERANTHERA PATTERSONII	1	0	0	0	0.3
SENECIO MULTILOBATUS	0	1	0	1	0.5
SUBTOTAL					4.8
GRASS - PLANTED					
AGROPYRON SPECIES	8	3	12	8	7.8
STIPA VIRIDULA	1	0	9	0	0.3
SUBTOTAL					8.1
GRASS - INVADED					
AGROPYRON CRISTATUM	1	0	0	0	0.3
BROMUS TECTORUM	3	2	2	3	2.5
KOELERIA MACRANTHA	2	0	0	3	1.3
SITANION HYSTRIX	3	1	0	0	1.0
SUBTOTAL					5.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	15	0	3.8
CHRYSOTHAMNUS NAUSEOSUS	4	0	3	3	2.5
PURSHIA TRIDENTATA	0	0	3	0	0.8
SUBTOTAL					7.0
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	6	0	0	0	1.5
SUBTOTAL					1.5
TOTAL PLANTED SPECIES					28.2
TOTAL INVADED SPECIES					11.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	4	0	2	3	2.3
LINUM LEWISII	12	20	12	3	11.8
MELILOTUS OFFICINALIS	2	3	2	1	2.0
SUBTOTAL					16.0
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	2	0	0	0.5
SENECIO MULTILOBATUS	1	0	0	0	0.3
UNKNOWN FORB	0	0	0	1	0.3
SUBTOTAL					1.0
GRASS - PLANTED					
AGROPYRON SPECIES	8	14	12	20	13.5
SUBTOTAL					13.5
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	0	3	0.8
BROMUS TECTORUM	18	4	0	0	5.5
SUBTOTAL					6.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	2	0	0.5
CERATOIDES LANATA	0	1	1	0	0.5
CHRYSOTHAMNUS NAUSEOSUS	0	0	1	1	0.5
SUBTOTAL					1.5
TOTAL PLANTED SPECIES					31.0
TOTAL INVADED SPECIES					7.3
GRAND TOTAL					38.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
LINUM LEWISII	5	10	15	12	10.5
MELILOTUS OFFICINALIS	2	0	0	0	0.5
SPHAERALCEA COCCINEA	0	0	2	0	0.5
SUBTOTAL					11.5
FORB - INVADED					
CHAENACTIS DOUGLASII	0	0	1	0	0.3
CRYPTANTHA SERICEA	1	0	0	1	0.5
IPOMOPSIS AGGREGATA	0	0	0	1	0.3
SENECIO MULTILOBATUS	2	0	1	0	0.8
SUBTOTAL					1.9
GRASS - PLANTED					
AGROPYRON SPECIES	5	6	8	5	6.0
SUBTOTAL					6.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	1	0	0	0.3
CERATOIDES LANATA	1	0	0	0	0.3
CHRYSOTHAMNUS NAUSEOSUS	0	0	2	7	2.3
SUBTOTAL					2.8
TOTAL PLANTED SPECIES					20.3
TOTAL INVADED SPECIES					1.9
GRAND TOTAL					22.2

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	8	2	7	0	4.3
LINUM LEWISII	7	9	1	2	4.8
SUBTOTAL					9.0
FORB - INVADED					
MACHAERANTHERA PATTERSONII	0	0	0	1	0.3
SENECIO MULTILOBATUS	1	0	1	0	0.5
SUBTOTAL					0.8
GRASS - PLANTED					
AGROPYRON SPECIES	20	18	45	45	32.0
STIPA VIRIDULA	0	0	0	4	1.0
SUBTOTAL					33.0
GRASS - INVADED					
SITANION HYSTRIX	0	2	0	0	0.5
SUBTOTAL					0.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	0	10	2.5
ATRIPLEX CANESCENS	0	0	0	3	0.8
CHRYSOTHAMNUS NAUSEOSUS	0	4	1	1	1.5
PURSHIA TRIDENTATA	0	0	1	0	0.3
SUBTOTAL					5.0
TOTAL PLANTED SPECIES					47.0
TOTAL INVADED SPECIES					1.3
GRAND TOTAL					48.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	0	7	4	2.8
LINUM LEWISII	13	8	18	7	11.5
MELILOTUS OFFICINALIS	15	2	2	0	4.8
SUBTOTAL					19.0
FORB - INVADED					
COMANDRA UMBELLATA	0	2	0	0	0.5
PHLOX HOODII	0	0	0	2	0.5
SUBTOTAL					1.0
GRASS - PLANTED					
AGROPYRON SPECIES	5	11	6	12	8.5
STIPA VIRIDULA	0	2	0	0	0.5
SUBTOTAL					9.0
GRASS - INVADED					
BROMUS TECTORUM	0	1	1	0	0.5
SUBTOTAL					0.5
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	4	6	0	5	3.9
PURSHIA TRIDENTATA	0	9	0	0	2.3
SUBTOTAL					6.0
TOTAL PLANTED SPECIES					34.0
TOTAL INVADED SPECIES					1.5
GRAND TOTAL					35.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	1	0	0	0.3
LINUM LEWISII	4	9	3	1	4.3
MELILOTUS OFFICINALIS	12	0	2	0	3.5
SUBTOTAL					8.0
FORB - INVADED					
CHAENACTIS DOUGLASII	1	1	0	0	0.5
CRYPTANTHA SERICEA	0	0	0	1	0.3
HAPLOPAPPUS NUTTALLII	0	1	0	0	0.3
IPOMOPSIS AGGREGATA	0	2	0	0	0.5
MACHAERANTHERA PATTERSONII	0	0	2	1	0.8
SENECIO MULTILOBATUS	1	1	0	0	0.5
TRAGOPOGON SPECIES	0	1	0	0	0.3
SUBTOTAL					3.0
GRASS - PLANTED					
AGROPYRON SPECIES	12	10	5	18	11.3
SUBTOTAL					11.3
GRASS - INVADED					
BROMUS TECTORUM	0	3	8	5	4.0
SUBTOTAL					4.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	2	0	1	0	0.8
CHRYSOTHAMNUS NAUSEOSUS	0	0	2	0	0.5
CHRYSOTHAMNUS VISCIDIFLORUS	0	0	3	0	0.8
SUBTOTAL					2.0
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	2	3	0	1.3
SUBTOTAL					1.3
TOTAL PLANTED SPECIES					25.1
TOTAL INVADED SPECIES					2.1
GRAND TOTAL					27.2

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT 6-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	25	0	2	6	[illegible]
LINUM LEWISII	14	[illegible]	5	12	[illegible]
MELILOTUS OFFICINALIS	2	[illegible]	0	0	[illegible]
SUBTOTAL					[illegible]
FORB - INVADED					
ERIOGONUM ALATUM	1	0	0	0	0.3
IPOMOPSIS AGGREGATA	1	0	0	0	0.3
TRAGOPOGON SPECIES	0	0	1	1	0.5
SUBTOTAL					1.0
GRASS - PLANTED					
AGROPYRON SPECIES	35	25	30	50	[illegible]
SUBTOTAL					[illegible]
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	[illegible]	0	[illegible]	[illegible]
CHRYSOTHAMNUS NAUSEOSUS	0	[illegible]	1	0	2.5
SUBTOTAL					[illegible]
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	1	[illegible]	0	0	[illegible]
SUBTOTAL					[illegible]
TOTAL PLANTED SPECIES					[illegible]
TOTAL INVADED SPECIES					[illegible]
GRAND TOTAL					[illegible]

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	15	0	0	4.0
LINUM LEWISII	6	5	3	5	4.9
MELILOTUS OFFICINALIS	3	1	0	1	1.7
SUBTOTAL					10.6
FORB - INVADED					
PHYSARIA FLORIBUNDA	1	0	0	0	0.3
SENECIO MULTILOBATUS	3	1	1	0	1.3
SUBTOTAL					1.6
GRASS - PLANTED					
AGROPYRON SPECIES	6	15	5	10	9.0
SUBTOTAL					9.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	1	0	0	0.3
PURSHIA TRIDENTATA	0	1	4	12	4.3
SUBTOTAL					5.0
TOTAL PLANTED SPECIES					24.9
TOTAL INVADED SPECIES					1.6
GRAND TOTAL					25.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1995

BLOCK=3 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS				TREATMENT PLOT
	#5	#6	#7	#8	AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	4	3	2	2.5
LINUM LEWISII	3	7	10	10	7.5
MELILOTUS OFFICINALIS	0	0	0	1	0.3
SUBTOTAL					11..
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	0	0	1	0.3
MACHAERANTHERA PATTERSONII	1	1	1	1	1.0
SUBTOTAL					1..
GRASS - PLANTED					
AGROPYRON SPECIES	20	28	30	12	22.5
SUBTOTAL					22.5
GRASS - INVADED					
BROMUS TECTORUM	0	0	2	0	0.5
SUBTOTAL					0.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	0	9	2.3
CHRYSOTHAMNUS NAUSEOSUS	1	0	0	0	0.3
CHRYSOTHAMNUS VISCIDIFLORUS	0	2	0	0	0.5
PURSHIA TRIDENTATA	0	1	0	0	0.3
SUBTOTAL					3..
TOTAL PLANTED SPECIES					36.3
TOTAL INVADED SPECIES					1.9
GRAND TOTAL					38.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	12	8	20	20	15.0
LINUM LEWISII	35	5	8	3	14.0
SUBTOTAL					29.0
FORB - INVADED					
CRUCIFERAE SPECIES	0	0	1	0	0.3
HAPLOPAPPUS NUTTALLII	1	0	0	0	0.3
IPOMOPSIS AGGREGATA	1	1	1	0	0.8
PHYSARIA FLORIBUNDA	0	0	1	0	0.3
SUBTOTAL					1.5
GRASS - PLANTED					
AGROPYRON SPECIES	2	3	30	35	17.5
STIPA VIRIDULA	3	5	0	0	2.0
SUBTOTAL					19.5
GRASS - INVADED					
BROMUS TECTORUM	4	3	0	0	1.7
KOELERIA MACRANTHA	0	4	5	0	2.3
SUBTOTAL					4.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	1	3	0	0	1.0
SUBTOTAL					1.0
TOTAL PLANTED SPECIES					49.5
TOTAL INVADED SPECIES					5.5
GRAND TOTAL					55.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
LINUM LEWISII	2	3	2	1	2.0
SUBTOTAL					2.0
FORB - INVADED					
MACHAERANTHERA PATTERSONII	0	1	3	0	1.0
SUBTOTAL					1.0
GRASS - PLANTED					
AGROPYRON SPECIES	20	20	10	12	15.5
STIPA VIRIDULA	0	0	0	2	0.5
SUBTOTAL					16.0
GRASS - INVADED					
BROMUS TECTORUM	7	2	1	3	3.3
SUBTOTAL					3.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	4	3	5	3.0
CERATOIDES LANATA	3	0	3	0	1.5
CHRYSOTHAMNUS NAUSEOSUS	0	1	0	15	4.0
CHRYSOTHAMNUS VISCIDIFLORUS	0	4	0	0	1.0
SUBTOTAL					9.5
TOTAL PLANTED SPECIES					27.5
TOTAL INVADED SPECIES					4.3
GRAND TOTAL					31.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	1	5	0	1.5
LINUM LEWISII	9	1	2	5	4.3
MELILOTUS OFFICINALIS	0	0	0	2	0.5
SUBTOTAL					6.3
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	0	0	0	0.0
MACHAERANTHERA PATTERSONII	1	0	0	0	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	8	20	20	12	15.0
SUBTOTAL					15.0
GRASS - INVADED					
BROMUS TECTORUM	8	4	0	0	3.0
SITANION HYSTRIX	10	2	0	0	3.0
SUBTOTAL					6.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	4	3	0	1.8
CHRYSOTHAMNUS NAUSEOSUS	6	9	2	1	3.8
PURSHIA TRIDENTATA	18	0	0	0	4.5
SUBTOTAL					9.8
TOTAL PLANTED SPECIES					30.8
TOTAL INVADED SPECIES					6.3
GRAND TOTAL					36.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	0	4	9	3.3
LINUM LEWISII	12	14	18	8	13.0
MELILOTUS OFFICINALIS	0	0	2	0	0.5
SPHAERALCEA COCCINEA	0	0	1	0	0.3
SUBTOTAL					17.0
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	3	2	0	1.3
MACHAERANTHERA PATTERSONII	0	1	0	0	0.3
SUBTOTAL					1.3
GRASS - PLANTED					
AGROPYRON SPECIES	45	10	20	30	26.3
SUBTOTAL					26.3
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	0	1	3	0	1.0
SUBTOTAL					1.0
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	1	0	3	1.0
SUBTOTAL					1.
TOTAL PLANTED SPECIES					46.3
TOTAL INVADED SPECIES					2.3
GRAND TOTAL					48.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	4	4	0	3	2.8
HEDYSARUM UTAHENSIS	0	1	9	0	2.3
LINUM LEWISII	2	18	5	2	6.8
MELILOTUS OFFICINALIS	1	3	2	3	2.1
SUBTOTAL					12.0
GRASS - PLANTED					
AGROPYRON SPECIES	12	25	12	25	18.5
SUBTOTAL					18.5
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	0	0	0	2	0.5
PURSHIA TRIDENTATA	0	5	2	1	2.0
SUBTOTAL					2.5
TOTAL PLANTED SPECIES					33.0
TOTAL INVADED SPECIES					0.0
GRAND TOTAL					33.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
LINUM LEWISII	40	4	7	5	13.0
SUBTOTAL					13.0
FORB - INVADED					
SENECIO MULTILOBATUS	1	0	0	0	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	5	15	30	25	18.1
SUBTOTAL					18.8
GRASS - INVADED					
BROMUS TECTORUM	0	0	0	2	0.5
SUBTOTAL					0.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	0	3	0.8
CHRYSOTHAMNUS NAUSEOSUS	0	1	5	0	1.5
CHRYSOTHAMNUS VISCIDIFLORUS	0	0	0	1	0.3
SUBTOTAL					2.5
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	0	4	0	1.0
SUBTOTAL					1.0
TOTAL PLANTED SPECIES					34.3
TOTAL INVADED SPECIES					1.8
GRAND TOTAL					36.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	6	13	5	0	[illegible]
LINUM LEWISII	4	8	2	8	5.5
MELILOTUS OFFICINALIS	2	0	1	0	0.8
SUBTOTAL					12.7
FORB - INVADED					
PHLOX HOODII	0	0	0	3	0.8
SUBTOTAL					0.8
GRASS - PLANTED					
AGROPYRON SPECIES	25	45	40	25	[illegible]
SUBTOTAL					[illegible]
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	0	5	1.3
BROMUS TECTORUM	3	0	0	2	1.0
SUBTOTAL					[illegible]
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	14	9	0	0	[illegible]
CERATOIDES LANATA	4	0	2	0	1.5
CHRYSOTHAMNUS NAUSEOSUS	12	0	2	0	[illegible]
SUBTOTAL					[illegible]
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	0	0	9	[illegible]
SUBTOTAL					[illegible]
TOTAL PLANTED SPECIES					[illegible]
TOTAL INVADED SPECIES					[illegible]
GRAND TOTAL					[illegible]

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	0	13	0	3.5
LINUM LEWISII	2	4	0	10	4.0
SUBTOTAL					7.5
GRASS - PLANTED					
AGROPYRON SPECIES	15	18	15	15	15.8
STIPA VIRIDULA	3	0	0	1	1.0
SUBTOTAL					16.8
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	5	0	1.3
BROMUS TECTORUM	5	8	1	0	3.5
SUBTOTAL					4.8
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	25	18	0	10.8
CHRYSOTHAMNUS NAUSEOSUS	0	2	9	0	2.8
SUBTOTAL					13.5
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	2	0	0	2	1.0
SUBTOTAL					1.0
TOTAL PLANTED SPECIES					37.3
TOTAL INVADED SPECIES					5.8
GRAND TOTAL					43.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	8	13	10	7.8
HEDYSARUM UTAHENSIS	8	3	0	0	2.8
LINUM LEWISII	2	7	3	4	4.0
SUBTOTAL					[illegible].5
FORB - INVADED					
CHAENACTIS DOUGLASII	0	1	0	0	0.3
MACHAERANTHERA PATTERSONII	1	0	0	0	0.3
SUBTOTAL					[illegible].5
GRASS - PLANTED					
AGROPYRON SPECIES	15	22	20	18	18.3
SUBTOTAL					18.8
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	0	2	0.5
CHRYSOTHAMNUS NAUSEOSUS	0	0	12	0	3.0
CHRYSOTHAMNUS VISCIDIFLORUS	0	6	0	0	1.5
SUBTOTAL					5.0
TOTAL PLANTED SPECIES					38.1
TOTAL INVADED SPECIES					0.5
GRAND TOTAL					38.8

APPENDIX 6-1.2

Plot R-2 Experimental Revegetation Data

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	3	1	0	0	1.0
LINUM LEWISII	6	9	8	7	7.5
SUBTOTAL					8.5
GRASS - PLANTED					
AGROPYRON SPECIES	12	8	5	6	7.8
ORYZOPSIS HYMENOIDES	3	0	8	0	[illegible]
STIPA VIRIDULA	0	0	0	2	0.5
SUBTOTAL					11.8
GRASS - INVADED					
SITANION HYSTRIX	2	0	3	0	1.3
SUBTOTAL					1.3
SHRUB - PLANTED					
CERATOIDES LANATA	2	0	0	0	0.5
CHRYSOTHAMNUS NAUSEOSUS	2	3	1	2	[illegible]
PURSHIA TRIDENTATA	7	2	0	0	[illegible]
SUBTOTAL					5.0
TOTAL PLANTED SPECIES					24.5
TOTAL INVADED SPECIES					[illegible]
GRAND TOTAL					25.9

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS				TREATMENT PLOT
	#5	#6	#7	#8	AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	4	25	0	10	9.3
LINUM LEWISII	0	1	8	3	3.0
SUBTOTAL					12.3
FORB - INVADED					
PHLOX HOODII	0	0	2	0	0.5
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	10	18	10	20	14.5
STIPA VIRIDULA	2	0	5	0	1.8
SUBTOTAL					16.3
GRASS - INVADED					
SITANION HYSTRIX	0	0	0	8	2.0
SUBTOTAL					2.0
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	35	25	20	5	21.3
PURSHIA TRIDENTATA	8	6	0	0	3.5
SUBTOTAL					24.8
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	3	0	0	3	1.5
SUBTOTAL					1.5
TOTAL PLANTED SPECIES					53.0
TOTAL INVADED SPECIES					4.0
GRAND TOTAL					57.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	10	6	5	0	5.3
LINUM LEWISII	3	4	5	3	3.5
MELILOTUS OFFICINALIS	0	0	0	4	1.0
SUBTOTAL					10.0
FORB - INVADED					
CHAENACTIS DOUGLASII	0	1	0	0	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	5	8	2	10	6.3
ELYMUS CINEREUS	3	0	0	0	0.8
ORYZOPSIS HYMENOIDES	5	0	2	0	1.8
STIPA VIRIDULA	3	3	0	0	1.5
SUBTOTAL					10.3
GRASS - INVADED					
SITANION HYSTRIX	0	0	0	1	0.3
SUBTOTAL					0.3
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	2	18	3	7	7.5
SUBTOTAL					7.5
TOTAL PLANTED SPECIES					27.3
TOTAL INVADED SPECIES					0.5
GRAND TOTAL					27.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	10	20	40	18	22.0
LINUM LEWISII	3	5	1	4	3.3
SUBTOTAL					25.3
FORB - INVADED					
IPOMOPSIS AGGREGATA	1	0	0	0	0.3
SENECIO MULTILOBATUS	0	0	0	1	0.3
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	5	19	10	8	10.3
ORYZOPSIS HYMENOIDES	5	0	3	0	2.0
STIPA VIRIDULA	3	0	9	3	3.8
SUBTOTAL					15.3
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	11	2	2	7	5.5
PURSHIA TRIDENTATA	8	10	0	0	4.5
SUBTOTAL					10.0
TOTAL PLANTED SPECIES					50.5
TOTAL INVADED SPECIES					1.5
GRAND TOTAL					51.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	3	0	0	1	1.0
LINUM LEWISII	2	8	12	4	6.5
MELILOTUS OFFICINALIS	0	0	0	3	0.8
SUBTOTAL					8.3
GRASS - PLANTED					
AGROPYRON SPECIES	25	18	5	9	14.3
ORYZOPSIS HYMENOIDES	0	4	4	4	3.0
SUBTOTAL					17.3
GRASS - INVADED					
SITANION HYSTRIX	0	0	2	0	0.5
SUBTOTAL					0.5
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	0	10	15	0	8.3
PURSHIA TRIDENTATA	0	9	0	3	3.0
SUBTOTAL					11.3
TOTAL PLANTED SPECIES					36.9
TOTAL INVADED SPECIES					0.5
GRAND TOTAL					37.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	14	0	29	8.3
LINUM LEWISII	2	2	2	2	2.0
SUBTOTAL					10.3
FORB - INVADED					
CRYPTANTHA SERICEA	1	0	0	0	0.3
MACHAERANTHERA PATTERSONII	2	0	2	0	1.0
SUBTOTAL					1.3
GRASS - PLANTED					
AGROPYRON SPECIES	3	5	10	12	7.5
ORYZOPSIS HYMENOIDES	9	0	0	0	2.3
STIPA VIRIDULA	2	0	0	0	0.5
SUBTOTAL					10.3
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	7	12	11	12	10.5
PURSHIA TRIDENTATA	0	0	0	1	0.3
SUBTOTAL					10.8
TOTAL PLANTED SPECIES					21.3
TOTAL INVADED SPECIES					1.3
GRAND TOTAL					22.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	3	1	2	1.5
LINUM LEWISII	8	10	2	9	7.3
MELILOTUS OFFICINALIS	0	0	0	2	0.5
SUBTOTAL					9.3
FORB - INVADED					
CRYPTANTHA SERICEA	1	0	0	1	0.5
IPOMOPSIS AGGREGATA	3	0	0	1	1.0
SENECIO MULTILOBATUS	1	1	0	1	0.8
SUBTOTAL					2.3
GRASS - PLANTED					
AGROPYRON SPECIES	5	10	8	0	5.3
ORYZOPSIS HYMENOIDES	5	0	1	0	1.5
STIPA VIRIDULA	0	3	0	7	2.5
SUBTOTAL					9.3
SHRUB - PLANTED					
CERATOIDES LANATA	0	2	0	1	0.7
CHRYSOTHAMNUS NAUSEOSUS	4	7	17	6	8.5
SUBTOTAL					9.3
TOTAL PLANTED SPECIES					28.7
TOTAL INVADED SPECIES					2.3
GRAND TOTAL					30.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	0	3	7	2.8
LINUM LEWISII	10	8	6	2	6.5
MELILOTUS OFFICINALIS	0	0	4	0	1.0
SUBTOTAL					10.3
FORB - INVADED					
MACHAERANTHERA PATTERSONII	1	0	0	0	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	3	0	3	15	5.3
ORYZOPSIS HYMENOIDES	8	8	1	0	4.3
SUBTOTAL					9.5
GRASS - INVADED					
SITANION HYSTRIX	0	3	0	3	1.5
SUBTOTAL					1.5
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	1	3	23	25	13.0
SUBTOTAL					13.0
TOTAL PLANTED SPECIES					32.8
TOTAL INVADED SPECIES					1.8
GRAND TOTAL					34.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	7	0	1	0	2.0
LINUM LEWISII	0	0	10	3	3.3
SUBTOTAL					5.3
FORB - INVADED					
MACHAERANTHERA PATTERSONII	0	0	0	1	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	25	2	2	1	7.5
ORYZOPSIS HYMENOIDES	0	5	1	5	2.8
STIPA VIRIDULA	0	0	0	4	1.0
SUBTOTAL					11.3
GRASS - INVADED					
SITANION HYSTRIX	4	0	0	0	1.0
SUBTOTAL					1.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	11	0	0	5	4.0
CHRYSOTHAMNUS NAUSEOSUS	22	29	12	6	17.0
SUBTOTAL					21.0
TOTAL PLANTED SPECIES					37.5
TOTAL INVADED SPECIES					1.3
GRAND TOTAL					38.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
LINUM LEWISII	1	9	8	2	5.0
SUBTOTAL					5.0
FORB - INVADED					
MACHAERANTHERA PATTERSONII	1	0	0	0	0.3
PHYSARIA FLORIBUNDA	0	0	0	1	0.3
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	13	3	2	4	5.5
ORYZOPSIS HYMENOIDES	0	3	3	0	1.5
STIPA VIRIDULA	3	10	6	2	5.1
SUBTOTAL					12.3
GRASS - INVADED					
SITANION HYSTRIX	0	0	0	2	0.5
SUBTOTAL					0.5
SHRUB - PLANTED					
ATRIPLEX CANESCENS	0	0	3	0	0.8
CERATOIDES LANATA	1	0	0	0	0.3
CHRYSOTHAMNUS NAUSEOSUS	11	14	17	30	18.0
PURSHIA TRIDENTATA	0	0	0	0	2.3
SUBTOTAL					21.3
TOTAL PLANTED SPECIES					39.5
TOTAL INVADED SPECIES					1.0
GRAND TOTAL					39.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT 8-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	2	10	0	0	3.0
LINUM LEWISII	0	0	0	1	0.3
SUBTOTAL					4.0
FORB - INVADED					
CRYPTANTHA SERICEA	1	0	0	0	0.3
MACHAERANTHERA PATTERSONII	0	0	2	0	0.5
SUBTOTAL					0.8
GRASS - PLANTED					
AGROPYRON SPECIES	5	10	6	9	7.5
ORYZOPSIS HYMENOIDES	4	0	2	0	1.5
STIPA VIRIDULA	0	0	0	3	0.8
SUBTOTAL					9.8
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	10	43	4	25	21.0
SUBTOTAL					21.0
TOTAL PLANTED SPECIES					35.5
TOTAL INVADED SPECIES					0.8
GRAND TOTAL					36.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= NO MULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	3	0	0	38	10.3
LINUM LEWISII	2	1	7	1	2.8
SUBTOTAL					13.0
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	1	0	0	0.3
MACHAERANTHERA PATTERSONII	0	0	1	0	0.3
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	0	7	5	20	8.0
ORYZOPSIS HYMENOIDES	0	1	0	0	0.3
STIPA VIRIDULA	0	0	3	4	1.8
SUBTOTAL					9.8
GRASS - INVADED					
AGROPYRON CRISTATUM	3	0	0	5	2.0
SITANION HYSTRIX	1	0	0	0	0.3
SUBTOTAL					2.3
SHRUB - PLANTED					
CERATOIDES LANATA	0	0	2	0	0.5
CHRYSOTHAMNUS NAUSEOSUS	22	35	22	9	22.0
PURSHIA TRIDENTATA	0	0	0	4	1.0
SUBTOTAL					23.5
TOTAL PLANTED SPECIES					46.3
TOTAL INVADED SPECIES					2.8
GRAND TOTAL					49.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	0	0	1	0.5
LINUM LEWISII	6	5	8	7	6.5
SUBTOTAL					7.0
FORB - INVADED					
CHAENACTIS DOUGLASII	1	1	0	0	0.5
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	6	2	4	4	4.0
ORYZOPSIS HYMENOIDES	4	0	7	0	2.8
STIPA VIRIDULA	1	4	5	0	2.5
SUBTOTAL					9.3
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	30	6	2	14	13.0
SUBTOTAL					13.0
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	1	4	0	2	1.3
SUBTOTAL					1.3
TOTAL PLANTED SPECIES					22.3
TOTAL INVADED SPECIES					1.8
GRAND TOTAL					31.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	18	0	2	1	5.3
LINUM LEWISII	3	3	0	1	2.3
SUBTOTAL					7.8
FORB - INVADED					
CHAENACTIS DOUGLASII	0	0	1	0	0.3
CRYPTANTHA SERICEA	0	0	1	0	0.3
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	15	12	8	9	11.0
ELYMUS CINEREUS	2	0	0	0	0.5
ORYZOPSIS HYMENOIDES	0	2	0	0	0.5
STIPA VIRIDULA	0	0	0	4	1.0
SUBTOTAL					13.0
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	18	45	10	22	23.8
PURSHIA TRIDENTATA	5	0	4	9	4.5
SUBTOTAL					28.3
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	2	0	0	3	1.3
SUBTOTAL					1.3
TOTAL PLANTED SPECIES					49.0
TOTAL INVADED SPECIES					1.9
GRAND TOTAL					50.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	9	0	3	3.3
LINUM LEWISII	4	1	0	1	1.5
SUBTOTAL					4.8
FORB - INVADED					
CRYPTANTHA SERICEA	0	0	1	0	0.3
SENECIO MULTILOBATUS	1	0	2	0	0.8
SUBTOTAL					1.0
GRASS - PLANTED					
AGROPYRON SPECIES	0	3	2	17	5.5
ELYMUS CINEREUS	0	2	0	0	0.5
ORYZOPSIS HYMENOIDES	15	2	2	0	4.8
SUBTOTAL					10.9
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	3	0	0.8
SUBTOTAL					0.8
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	22	0	9	5.5
CHRYSOTHAMNUS NAUSEOSUS	18	8	22	18	16.5
PURSHIA TRIDENTATA	14	9	1	10	6.3
SUBTOTAL					28.3
TOTAL PLANTED SPECIES					45.8
TOTAL INVADED SPECIES					1.8
GRAND TOTAL					45.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	8	0	0	2.0
LINUM LEWISII	7	3	5	7	5.5
MELILOTUS OFFICINALIS	0	2	4	0	1.5
SUBTOTAL					9.0
FORB - INVADED					
CHAENACTIS DOUGLASII	0	0	1	0	0.3
IPOMOPSIS AGGREGATA	2	1	0	1	1.0
SENECIO MULTILOBATUS	0	1	0	1	0.5
SUBTOTAL					1.8
GRASS - PLANTED					
AGROPYRON SPECIES	1	12	3	9	3.0
ORYZOPSIS HYMENOIDES	0	0	5	0	1.3
STIPA VIRIDULA	0	0	5	0	1.3
SUBTOTAL					8.5
SHRUB - PLANTED					
CERCOCARPUS MONTANUS	0	2	0	0	0.5
CHRYSOTHAMNUS NAUSEOSUS	1	65	8	25	24.8
PURSHIA TRIDENTATA	0	0	0	3	0.8
SUBTOTAL					26.0
TOTAL PLANTED SPECIES					43.5
TOTAL INVADED SPECIES					1.8
GRAND TOTAL					45.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	6	4	40	1	12.3
LINUM LEWISII	3	7	4	4	4.5
SUBTOTAL					17.3
GRASS - PLANTED					
AGROPYRON SPECIES	6	0	6	15	6.3
ELYMUS CINEREUS	4	0	0	0	1.0
STIPA VIRIDULA	4	0	0	0	1.0
SUBTOTAL					8.3
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	3	0	0.8
SITANION HYSTRIX	0	1	0	0	0.3
SUBTOTAL					1.0
SHRUB - PLANTED					
CERATOIDES LANATA	0	0	0	2	0.5
CHRYSOTHAMNUS NAUSEOSUS	2	8	9	40	14.8
PURSHIA TRIDENTATA	0	0	0	8	2.0
SUBTOTAL					17.3
TOTAL PLANTED SPECIES					43.1
TOTAL INVADED SPECIES					1.0
GRAND TOTAL					44.1

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	3	30	18	1	13.0
LINUM LEWISII	4	0	0	2	1.5
MELILOTUS OFFICINALIS	0	0	0	2	0.5
SUBTOTAL					15.0
FORB - INVADED					
SENECIO MULTILOBATUS	0	0	0	1	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	10	10	15	5	10.0
ORYZOPSIS HYMENOIDES	4	0	4	4	3.0
STIPA VIRIDULA	0	0	0	3	0.8
SUBTOTAL					13.8
GRASS - INVADED					
AGROPYRON CRISTATUM	0	2	0	0	0.5
POA SPECIES	0	0	0	2	0.5
SUBTOTAL					1.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	11	0	2.8
CHRYSOTHAMNUS NAUSEOSUS	11	25	12	29	17.0
PURSHIA TRIDENTATA	9	10	3	0	5.5
SUBTOTAL					25.3
TOTAL PLANTED SPECIES					54.0
TOTAL INVADED SPECIES					1.3
GRAND TOTAL					55.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	9	0	0	2	2.8
LINUM LEWISII	6	7	12	3	7.0
MELILOTUS OFFICINALIS	0	0	0	2	0.5
SUBTOTAL					10.3
FORB - INVADED					
SENECIO MULTILOBATUS	0	0	1	1	0.5
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	2	5	10	3	5.0
ORYZOPSIS HYMENOIDES	2	0	0	9	2.8
STIPA VIRIDULA	3	0	8	7	4.5
SUBTOTAL					12.3
GRASS - INVADED					
AGROPYRON CRISTATUM	2	0	0	0	0.5
SUBTOTAL					0.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	4	2	1.5
CERATOIDES LANATA	0	0	1	0	0.3
CHRYSOTHAMNUS NAUSEOSUS	18	3	0	2	5.3
SUBTOTAL					7.5
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	0	0	2	0.5
SUBTOTAL					0.5
TOTAL PLANTED SPECIES					30.3
TOTAL INVADED SPECIES					1.5
GRAND TOTAL					31.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	0	2	20	5.5
LINUM LEWISII	6	3	3	4	4.0
MELILOTUS OFFICINALIS	0	2	1	0	0.8
SUBTOTAL					10.3
FORB - INVADED					
CHAENACTIS DOUGLASII	0	0	1	0	0.3
SENECIO MULTILOBATUS	0	0	0	1	0.3
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	10	2	3	10	6.3
ELYMUS CINEREUS	0	0	8	0	2.0
ORYZOPSIS HYMENOIDES	0	1	4	0	1.3
STIPA VIRIDULA	3	0	0	4	1.8
SUBTOTAL					11.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	6	0	0	0	1.5
CHRYSOTHAMNUS NAUSEOSUS	22	6	5	16	12.3
PURSHIA TRIDENTATA	3	0	9	3	3.8
SUBTOTAL					17.5
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	3	0	0	0.8
SUBTOTAL					0.8
TOTAL PLANTED SPECIES					39.0
TOTAL INVADED SPECIES					1.3
GRAND TOTAL					40.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	12	7	0	4	5.8
SUBTOTAL					5.8
FORB - INVADED					
MACHAERANTHERA PATTERSONII	0	0	2	0	0.5
PHLOX HOODII	0	3	2	0	1.3
SENECIO MULTILOBATUS	1	0	0	0	0.3
SUBTOTAL					2.0
GRASS - PLANTED					
AGROPYRON SPECIES	5	5	2	18	7.5
ELYMUS CINEREUS	0	2	0	0	0.5
ORYZOPSIS HYMENOIDES	2	2	8	5	4.3
STIPA VIRIDULA	0	3	0	0	0.8
SUBTOTAL					13.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	3	0	0	0	0.8
CHRYSOTHAMNUS NAUSEOSUS	30	12	28	3	18.3
PURSHIA TRIDENTATA	0	18	0	4	5.5
SUBTOTAL					24.5
TOTAL PLANTED SPECIES					43.3
TOTAL INVADED SPECIES					2.0
GRAND TOTAL					45.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	3	0	9	3.3
LINUM LEWISII	12	7	4	10	8.3
MELILOTUS OFFICINALIS	0	2	0	0	0.5
SUBTOTAL					12.0
FORB - INVADED					
CRYPTANTHA SERICEA	1	1	0	1	0.8
IPOMOPSIS AGGREGATA	1	0	1	0	0.5
MACHAERANTHERA PATTERSONII	1	0	0	0	0.3
PHYSARIA FLORIBUNDA	1	0	0	0	0.3
SENECIO MULTILOBATUS	0	0	0	3	0.8
SUBTOTAL					2.5
GRASS - PLANTED					
AGROPYRON SPECIES	10	8	18	4	10.0
ORYZOPSIS HYMENOIDES	0	0	0	4	1.0
STIPA VIRIDULA	0	0	12	0	3.0
SUBTOTAL					14.0
GRASS - INVADED					
AGROPYRON CRISTATUM	0	15	0	0	3.8
SUBTOTAL					3.8
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	4	0	1.0
CHRYSOTHAMNUS NAUSEOSUS	0	80	2	4	21.5
PURSHIA TRIDENTATA	4	4	0	0	2.0
SUBTOTAL					24.5
TOTAL PLANTED SPECIES					53.5
TOTAL INVADED SPECIES					6.3
GRAND TOTAL					59.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	0	3	9	3.3
LINUM LEWISII	2	0	1	2	1.3
MELILOTUS OFFICINALIS	0	1	0	1	0.5
SUBTOTAL					5.0
FORB - INVADED					
MACHAERANTHERA PATTERSONII	1	0	0	0	0.3
SENECIO MULTILOBATUS	1	0	0	0	0.3
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	20	3	14	10	11.7
STIPA VIRIDULA	0	3	3	2	2.0
SUBTOTAL					13.3
GRASS - INVADED					
SITANION HYSTRIX	0	1	0	0	0.3
SUBTOTAL					0.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	3	0	0.8
CHRYSOTHAMNUS NAUSEOSUS	5	16	2	0	5.3
PURSHIA TRIDENTATA	4	0	0	0	1.0
SUBTOTAL					7.3
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	1	0	0	0	0.3
SUBTOTAL					0.3
TOTAL PLANTED SPECIES					26.3
TOTAL INVADED SPECIES					1.0
GRAND TOTAL					27.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= HYDROMULCH
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	2	1	1	18	5.5
LINUM LEWISII	3	10	0	0	3.3
MELILOTUS OFFICINALIS	0	0	1	2	0.8
SUBTOTAL					9.5
FORB - INVADED					
CRYPTANTHA SERICEA	1	0	0	0	0.3
IPOMOPSIS AGGREGATA	0	0	1	0	0.3
PHYSARIA FLORIBUNDA	0	0	0	1	0.3
SENECIO MULTILOBATUS	0	1	0	1	0.5
SUBTOTAL					1.3
GRASS - PLANTED					
AGROPYRON SPECIES	4	2	20	8	8.3
ELYMUS CINEREUS	0	0	2	0	0.5
ORYZOPSIS HYMENOIDES	5	4	2	3	3.5
SUBTOTAL					12.3
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	4	7	4	8	5.3
PURSHIA TRIDENTATA	0	0	0	12	3.0
SUBTOTAL					8.3
TOTAL PLANTED SPECIES					29.9
TOTAL INVADED SPECIES					1.3
GRAND TOTAL					31.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-1
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	30	25	12	16.9
LINUM LEWISII	2	10	3	5	5.0
SUBTOTAL					21.8
FORB - INVADED					
HAPLOPAPPUS NUTTALLII	0	1	1	0	0.5
SENECIO MULTILOBATUS	3	0	0	1	0.8
SUBTOTAL					1.3
GRASS - PLANTED					
AGROPYRON SPECIES	14	9	8	3	8.9
ORYZOPSIS HYMENOIDES	2	0	0	*	.5
STIPA VIRIDULA	0	0	2	0	0.5
SUBTOTAL					10.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	5	0	0	0	1.3
CERATOIDES LANATA	0	0	1	0	0.3
CHRYSOTHAMNUS NAUSEOSUS	7	4	8	1	5.0
PURSHIA TRIDENTATA	0	0	15	0	3.8
SUBTOTAL					10.4
TOTAL PLANTED SPECIES					32.2
TOTAL INVADED SPECIES					1.3
GRAND TOTAL					45.1

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	3	12	9	13	7.0
LINUM LEWISII	2	6	9	7	5.0
SUBTOTAL					12.0
FORB - INVADED					
SENECIO MULTILOBATUS	0	1	0	0	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	16	8	1	15	10.0
ORYZOPSIS HYMENOIDES	0	3	3	4	2.5
SUBTOTAL					12.5
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	0	3	0.8
SUBTOTAL					0.8
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	30	9	3	0	10.5
PURSHIA TRIDENTATA	3	0	0	0	0.8
SUBTOTAL					11.3
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	0	6	0	1.5
SUBTOTAL					1.5
TOTAL PLANTED SPECIES					23.8
TOTAL INVADED SPECIES					2.3
GRAND TOTAL					26.1

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS				TREATMENT PLOT AVERAGE
	#5	#6	#7	#8	
FORB - PLANTED					
ASTRAGALUS CICER	4	12	0	59	16.7
LINUM LEWISII	0	1	1	1	0.7
MELILOTUS OFFICINALIS	0	0	1	0	0.2
SUBTOTAL					17.5
FORB - INVADED					
MACHAERANTHERA PATTERSONII	0	1	0	0	0.2
SENECIO MULTILOBATUS	2	0	0	5	0.5
SUBTOTAL					0.7
GRASS - PLANTED					
AGROPYRON SPECIES	4	8	10	8	7.5
ORYZOPSIS HYMENOIDES	3	3	0	0	1.5
STIPA VIRIDULA	3	0	2	0	1.2
SUBTOTAL					10.2
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	5	2	1.7
CHRYSOTHAMNUS NAUSEOSUS	23	25	11	10	17.2
RHUS TRILOBATA	1	0	0	0	0.2
SUBTOTAL					19.7
SHRUB - INVADED					
CUTIERREZIA SAROTHRAE	0	0	0	2	0.5
SUBTOTAL					0.5
TOTAL PLANTED SPECIES					48.1
TOTAL INVADED SPECIES					1.2
GRAND TOTAL					49.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	6	3	0	2.3
LINUM LEWISII	7	3	5	2	4.3
SUBTOTAL					6.5
FORB - INVADED					
IPOMOPSIS AGGREGATA	0	0	0	1	0.3
SENECIO MULTILOBATUS	0	1	0	1	0.5
SUBTOTAL					0.8
GRASS - PLANTED					
AGROPYRON SPECIES	4	15	2	7	7.0
ORYZOPSIS HYMENOIDES	5	3	0	8	4.0
STIPA VIRIDULA	0	0	6	3	2.3
SUBTOTAL					13.3
GRASS - INVADED					
SITANION HYSTRIX	2	0	0	0	0.5
SUBTOTAL					0.5
SHRUB - PLANTED					
ATRIPLEX CANESCENS	2	9	0	0	2.5
CHRYSOTHAMNUS NAUSEOSUS	0	0	4	0	1.0
PURSHIA TRIDENTATA	0	13	0	0	3.3
SUBTOTAL					6.8
TOTAL PLANTED SPECIES					27.5
TOTAL INVADED SPECIES					1.3
GRAND TOTAL					28.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	5	20	8	5	9.3
SUBTOTAL					9.3
GRASS - PLANTED					
AGROPYRON SPECIES	8	20	15	10	13.3
STIPA VIRIDULA	0	0	5	4	2.3
SUBTOTAL					17.5
SHRUB - PLANTED					
CERATOIDES LANATA	0	0	1	0	0.3
CHRYSOTHAMNUS NAUSEOSUS	18	3	43	11	18.8
PURSHIA TRIDENTATA	0	0	3	7	2.5
SUBTOTAL					21.5
TOTAL PLANTED SPECIES					48.3
TOTAL INVADED SPECIES					0.1
GRAND TOTAL					48.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	18	35	8	35	24.0
LINUM LEWISII	3	3	0	0	1.5
SUBTOTAL					25.5
FORB - INVADED					
SENECIO MULTILOBATUS	0	0	0	1	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	5	10	25	25	16.3
SUBTOTAL					16.3
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	5	0	1.3
BROMUS TECTORUM	1	0	0	0	0.3
SITANION HYSTRIX	0	2	0	0	0.5
SUBTOTAL					2.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	9	9	10	1	7.3
CHRYSOTHAMNUS NAUSEOSUS	30	15	10	10	16.3
PURSHIA TRIDENTATA	0	0	0	0	2.0
SUBTOTAL					25.5
TOTAL PLANTED SPECIES					41.5
TOTAL INVADED SPECIES					2.3
GRAND TOTAL					37.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	0	0	18	4.5
LINUM LEWISII	6	3	3	10	5.5
SUBTOTAL					10.0
GRASS - PLANTED					
AGROPYRON SPECIES	2	16	14	20	13.0
ORYZOPSIS HYMENOIDES	4	0	0	0	1.0
STIPA VIRIDULA	5	1	0	0	1.5
SUBTOTAL					15.5
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	0	1	0.3
BROMUS TECTORUM	0	1	0	0	0.3
SUBTOTAL					0.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	4	0	0	1.0
CHRYSOTHAMNUS NAUSEOSUS	3	9	22	4	7.3
PURSHIA TRIDENTATA	0	0	10	6	4.0
SUBTOTAL					12.3
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	3	1	0	1.0
SUBTOTAL					1.0
TOTAL PLANTED SPECIES					27.8
TOTAL INVADED SPECIES					1.5
GRAND TOTAL					29.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT 8-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	2	3	12	18	8.8
LINUM LEWISII	0	8	4	3	3.8
SUBTOTAL					12.5
GRASS - PLANTED					
AGROPYRON SPECIES	14	5	10	12	10.3
ORYZOPSIS HYMENOIDES	6	2	0	9	4.3
SUBTOTAL					14.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	15	0	3.8
CHRYSOTHAMNUS NAUSEOSUS	3	18	8	28	14.3
PURSHIA TRIDENTATA	15	0	0	14	7.3
SUBTOTAL					25.3
TOTAL PLANTED SPECIES					50.0
TOTAL INVADED SPECIES					0.0
GRAND TOTAL					50.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	7	25	0	4	9.0
LINUM LEWISII	1	0	3	2	1.5
SUBTOTAL					10.5
GRASS - PLANTED					
AGROPYRON SPECIES	5	5	3	25	9.5
ORYZOPSIS HYMENOIDES	0	3	4	6	3.3
STIPA VIRIDULA	0	0	3	2	1.3
SUBTOTAL					14.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	3	0	0	0.5
CHRYSOTHAMNUS NAUSEOSUS	0	17	25	12	13.5
SUBTOTAL					14.0
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	1	0	0	2	0.8
SUBTOTAL					0.8
TOTAL PLANTED SPECIES					38.8
TOTAL INVADED SPECIES					0.8
GRAND TOTAL					39.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1995

BLOCK=1 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	7	2	1	4	3.5
LINUM LEWISII	3	8	9	15	8.8
SUBTOTAL					12.3
FORB - INVADED					
CRYPTANTHA SERICEA	0	1	0	0	0.3
IPOMOPSIS AGGREGATA	1	2	0	1	1.0
MACHAERANTHERA PATTERSONII	1	0	0	0	0.3
SUBTOTAL					1.5
GRASS - PLANTED					
AGROPYRON SPECIES	10	2	5	1	5.0
ORYZOPSIS HYMENOIDES	0	7	1	4	3.0
STIPA VIRIDULA	3	0	3	6	3.0
SUBTOTAL					8.0
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	6	1	0	0	1.8
PURSHIA TRIDENTATA	13	0	0	0	3.3
SUBTOTAL					5.0
TOTAL PLANTED SPECIES					25.0
TOTAL INVADED SPECIES					3.3
GRAND TOTAL					28.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	35	0	5	5	11.3
SUBTOTAL					11.3
GRASS - PLANTED					
AGROPYRON SPECIES	22	10	18	9	14.8
ORYZOPSIS HYMENOIDES	0	2	0	3	.3
SUBTOTAL					15.0
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	10	25	15	18	17.0
PURSHIA TRIDENTATA	0	12	0	0	3.0
SUBTOTAL					20.0
TOTAL PLANTED SPECIES					47.3
TOTAL INVADED SPECIES					0.0
GRAND TOTAL					47.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-CRIMPING
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	4	35	7	4	12.5
LINUM LEWISII	2	0	4	2	2.0
SUBTOTAL					14.5
FORB - INVADED					
MACHAERANTHERA PATTERSONII	0	0	1	1	0.5
SENECIO MULTILOBATUS	1	0	0	0	0.3
SUBTOTAL					0.8
GRASS - PLANTED					
AGROPYRON SPECIES	8	8	15	13	11.6
ORYZOPSIS HYMENOIDES	5	0	3	3	2.3
STIPA VIRIDULA	5	0	0	0	1.3
SUBTOTAL					15.0
GRASS - INVADED					
SITANION HYSTRIX	0	2	0	0	0.5
SUBTOTAL					0.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	28	3	0	7.9
CHRYSOTHAMNUS NAUSEOSUS	1	15	2	22	10.0
SUBTOTAL					17.8
TOTAL PLANTED SPECIES					47.3
TOTAL INVADED SPECIES					1.3
GRAND TOTAL					48.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	4	2	1	0	1.8
LINUM LEWISII	2	5	2	2	2.8
SUBTOTAL					4.5
FORB - INVADED					
IPOMOPSIS AGGREGATA	1	0	0	0	0.3
SUBTOTAL					3.3
GRASS - PLANTED					
AGROPYRON SPECIES	8	18	10	15	12.3
STIPA VIRIDULA	3	0	0	2	1.3
SUBTOTAL					14.0
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	5	0	1.3
SUBTOTAL					1.7
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	3	47	2	1	13.3
CHRYSOTHAMNUS NAUSEOSUS	35	0	45	5	21.3
PURSHIA TRIDENTATA	3	0	0	12	3.8
SUBTOTAL					38.3
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	3	1	0	1	1.3
SUBTOTAL					1.3
TOTAL PLANTED SPECIES					56.3
TOTAL INVADED SPECIES					3.3
GRAND TOTAL					59.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	15	2	0	28	11.3
LINUM LEWISII	4	7	10	10	7.0
MELILOTUS OFFICINALIS	0	0	3	0	0.8
SUBTOTAL					19.1
FORB - INVADED					
SENECIO MULTILOBATUS	0	1	0	0	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	30	8	10	18	16.5
ORYZOPSIS HYMENOIDES	0	5	8	0	3.3
STIPA VIRIDULA	0	5	0	0	1.3
SUBTOTAL					21.0
GRASS - INVADED					
BROMUS TECTORUM	1	0	0	0	0.3
SUBTOTAL					0.3
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	4	0	0	0	1.0
CHRYSOTHAMNUS NAUSEOSUS	10	16	2	4	8.0
PURSHIA TRIDENTATA	0	3	8	0	2.8
SUBTOTAL					11.8
TOTAL PLANTED SPECIES					52.9
TOTAL INVADED SPECIES					0.5
GRAND TOTAL					53.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1995

BLOCK=3 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=NO FERTILIZER

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	30	3	20	35	22.0
LINUM LEWISII	0	1	0	1	0.5
SUBTOTAL					22.5
GRASS - PLANTED					
AGROPYRON SPECIES	28	55	35	30	37.0
ELYMUS CINEREUS	0	1	0	0	0.3
ORYZOPSIS HYMENOIDES	0	2	0	0	0.5
STIPA VIRIDULA	0	2	0	0	0.5
SUBTOTAL					38.3
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	0	4	1.0
SUBTOTAL					1.0
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	4	4	18	7	8.3
SUBTOTAL					8.3
TOTAL PLANTED SPECIES					69.0
TOTAL INVADED SPECIES					1.0
GRAND TOTAL					70.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1995

BLOCK=1 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	28	0	0	14	10.5
LINUM LEWISII	7	6	5	3	5.3
SUBTOTAL					15.3
FORB - INVADED					
CHAENACTIS DOUGLASII	0	0	1	0	0.3
CRYPTANTHA SERICEA	0	1	0	0	0.1
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	18	10	2	18	12.0
ORYZOPSIS HYMENOIDES	0	8	3	0	2.8
STIPA VIRIDULA	0	0	5	2	1.9
SUBTOTAL					16.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	7	7	3.5
CHRYSOTHAMNUS NAUSEOSUS	12	13	0	9	6.3
PURSHIA TRIDENTATA	0	0	0	2	0.5
SUBTOTAL					10.3
TOTAL PLANTED SPECIES					42.5
TOTAL INVADED SPECIES					0.5
GRAND TOTAL					43.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	1	0	0	0.3
LINUM LEWISII	2	1	3	0	1.5
SUBTOTAL					1.8
GRASS - PLANTED					
AGROPYRON SPECIES	18	10	13	24	17.5
SUBTOTAL					17.5
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	8	0	2.0
SITANION HYSTRIX	0	9	0	2	2.5
SUBTOTAL					4.5
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	22	7	8	4	10.3
SUBTOTAL					10.3
TOTAL PLANTED SPECIES					29.5
TOTAL INVADED SPECIES					4.5
GRAND TOTAL					33.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-SOWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	2	0	5	3	2.5
LINUM LEWISII	1	3	2	3	2.7
SUBTOTAL					1.9
FORB - INVADED					
SENECIO MULTILOBATUS	0	0	1	0	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	30	2	2	12	11.5
ORYZOPSIS HYMENOIDES	2	9	1	0	3.0
SUBTOTAL					14.5
GRASS - INVADED					
SITANION HYSTRIX	0	2	1	0	0.8
SUBTOTAL					0.8
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	2	2	1.0
CHRYSOTHAMNUS NAUSEOSUS	8	19	15	25	16.5
PURSHIA TRIDENTATA	25	0	0	0	6.3
SUBTOTAL					23.8
TOTAL PLANTED SPECIES					43.9
TOTAL INVADED SPECIES					1.0
GRAND TOTAL					44.9

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	3	0	0	1.0
LINUM LEWISII	3	3	1	2	2.3
SUBTOTAL					3.3
FORB - INVADED					
CHAENACTIS DOUGLASII	0	0	0	1	0.3
HAPLOPAPPUS NUTTALLII	0	0	1	0	0.3
PHYSARIA FLORIBUNDA	0	0	0	1	0.3
SENECIO MULTILOBATUS	0	0	0	1	0.3
SUBTOTAL					1.0
GRASS - PLANTED					
AGROPYRON SPECIES	12	16	20	10	14.5
ORYZOPSIS HYMENOIDES	5	0	0	0	1.3
STIPA VIRIDULA	8	4	3	4	4.9
SUBTOTAL					20.5
GRASS - INVADED					
BROMUS TECTORUM	0	0	0	2	0.5
SITANION HYSTRIX	3	2	2	0	1.8
SUBTOTAL					2.3
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	30	10	5	30	18.8
PURSHIA TRIDENTATA	0	4	0	0	1.0
SUBTOTAL					19.8
TOTAL PLANTED SPECIES					43.5
TOTAL INVADED SPECIES					3.3
GRAND TOTAL					46.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
LINUM LEWISII	5	5	9	2	5.3
SUBTOTAL					5.3
GRASS - PLANTED					
AGROPYRON SPECIES	12	13	2	15	10.5
STIPA VIRIDULA	0	4	0	0	1.0
SUBTOTAL					11.5
GRASS - INVADED					
AGROPYRON CRISTATUM	0	0	3	0	0.8
SITANION HYSTRIX	0	0	0	5	1.3
SUBTOTAL					2.0
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	7	4	2.8
CHRYSOTHAMNUS NAUSEOSUS	8	0	17	12	9.3
SUBTOTAL					12.0
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	0	3	3	0	1.5
SUBTOTAL					1.5
TOTAL PLANTED SPECIES					28.8
TOTAL INVADED SPECIES					3.5
GRAND TOTAL					32.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	9	0	6	13	7.0
LINUM LEWISII	2	0	2	3	1.8
SUBTOTAL					8.8
FORB - INVADED					
MACHAERANTHERA PATTERSONII	0	1	0	0	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	25	15	10	14	16.0
STIPA VIRIDULA	0	0	4	2	1.5
SUBTOTAL					17.5
GRASS - INVADED					
SITANION HYSTRIX	0	0	0	2	0.5
SUBTOTAL					0.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	0	0	4	1.0
CHRYSOTHAMNUS NAUSEOSUS	14	30	4	2	12.5
SUBTOTAL					13.5
TOTAL PLANTED SPECIES					39.8
TOTAL INVADED SPECIES					0.8
GRAND TOTAL					40.5

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=1 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	1	9	6	15	7.8
LINUM LEWISII	4	10	4	0	4.5
SUBTOTAL					12.3
FORB - INVADED					
IPOMOPSIS AGGREGATA	1	0	0	0	0.3
SUBTOTAL					0.3
GRASS - PLANTED					
AGROPYRON SPECIES	7	8	5	18	9.5
ORYZOPSIS HYMENOIDES	4	5	0	0	2.3
STIPA VIRIDULA	1	0	3	8	3.0
SUBTOTAL					14.8
GRASS - INVADED					
BROMUS TECTORUM	0	1	0	0	0.3
SITANION HYSTRIX	0	2	3	0	1.1
SUBTOTAL					1.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	16	0	0	3	4.8
CHRYSOTHAMNUS NAUSEOSUS	0	4	18	3	6.3
PURSHIA TRIDENTATA	0	0	0	20	5.0
SUBTOTAL					16.0
SHRUB - INVADED					
GUTIERREZIA SAROTHRAE	1	1	0	0	0.5
SUBTOTAL					0.5
TOTAL PLANTED SPECIES					43.0
TOTAL INVADED SPECIES					2.3
GRAND TOTAL					45.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=2 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	0	0	15	20	9.0
LINUM LEWISII	3	2	0	0	1.3
SUBTOTAL					10.3
FORB - INVADED					
SENECIO MULTILOBATUS	0	1	1	0	0.5
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	22	18	25	15	20.0
ORYZOPSIS HYMENOIDES	3	1	0	0	1.0
STIPA VIRIDULA	2	2	0	4	2.0
SUBTOTAL					23.0
SHRUB - PLANTED					
CHRYSOTHAMNUS NAUSEOSUS	5	8	20	35	17.0
PURSHIA TRIDENTATA	0	3	10	0	3.3
SUBTOTAL					20.3
TOTAL PLANTED SPECIES					53.3
TOTAL INVADED SPECIES					0.5
GRAND TOTAL					53.8

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-2
REPORT YEAR= 1985

BLOCK=3 MULCH TREATMENT= STRAW-NETTING
FERTILIZER TREATMENT=FERTILIZER-SOWING/1ST GROWING

SPECIES	SUBPLOTS #5	#6	#7	#8	TREATMENT PLOT AVERAGE
FORB - PLANTED					
ASTRAGALUS CICER	35	0	10	13	14.5
LINUM LEWISII	1	2	1	1	1.3
MELILOTUS OFFICINALIS	0	0	6	0	1.5
SUBTOTAL					17.3
FORB - INVADED					
CRYPTANTHA SERICEA	2	0	0	0	0.5
SUBTOTAL					0.5
GRASS - PLANTED					
AGROPYRON SPECIES	14	4	28	18	16.0
ORYZOPSIS HYMENOIDES	0	3	0	3	1.5
SUBTOTAL					17.5
SHRUB - PLANTED					
ARTEMISIA TRIDENTATA	0	25	0	22	11.8
CERATOIDES LANATA	0	0	0	1	0.3
CHRYSOTHAMNUS NAUSEOSUS	4	0	12	1	4.3
PURSHIA TRIDENTATA	0	12	0	0	3.0
SUBTOTAL					19.3
TOTAL PLANTED SPECIES					54.0
TOTAL INVADED SPECIES					0.5
GRAND TOTAL					54.5

APPENDIX 6-1.3

Plot R-3 Experimental Revegetation Data

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 1
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= HIGH SEEDING RATE (28 KG/HA)
MULCHING TREATMENT= HAY (4.5 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	5	15	20	13.3
SUBTOTAL				13.3
GRASS - PLANTED				
AGROPYRON SPECIES	30	25	30	28.3
AGROPYRON TRICHOPHORUM	15	5	0	6.7
SUBTOTAL				35.0
GRASS - INVADED				
PHLEUM PRATENSE	0	2	0	0.7
SUBTOTAL				0.7
SHRUB - PLANTED				
ARTEMISIA TRIDENTATA	0	0	6	2.0
ATRIPLEX CANESCENS	0	5	0	1.7
CERATOIDES LANATA	12	20	6	12.7
CHRYSOTHAMNUS NAUSEOSUS	15	0	10	8.3
SUBTOTAL				24.7
TOTAL PLANTED SPECIES				73.0
TOTAL INVADED SPECIES				0.7
GRAND TOTAL				73.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 2
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= HIGH SEEDING RATE (28 KG/HA)
MULCHING TREATMENT= NO MULCH

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	6	5	35	15.3
SUBTOTAL				15.3
GRASS - PLANTED				
AGROPYRON SPECIES	35	20	20	25.0
AGROPYRON TRICHOPHORUM	0	10	0	3.3
ORYZOPSIS HYMENOIDES	0	0	1	0.3
SUBTOTAL				28.7
SHRUB - PLANTED				
ATRIPLEX CANESCENS	25	6	12	14.3
CERATOIDES LANATA	13	20	5	12.7
CHRYSOTHAMNUS NAUSEOSUS	0	0	13	4.3
PURSHIA TRIDENTATA	0	3	3	2.0
SUBTOTAL				33.3
TOTAL PLANTED SPECIES				77.3
TOTAL INVADED SPECIES				0.0
GRAND TOTAL				77.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 3
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= HIGH SEEDING RATE (28 KG/HA)
MULCHING TREATMENT= HYDROMULCH (1.7 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	0	8	8	5.3
SUBTOTAL				5.3
FORB - INVADED				
UNKNOWN FORB	1	1	0	0.7
SUBTOTAL				0.7
GRASS - PLANTED				
AGROPYRON SPECIES	55	40	35	43.3
AGROPYRON TRICHOPHORUM	5	5	0	3.3
ORYZOPSIS HYMENOIDES	0	1	0	0.3
STIPA VIRIDULA	0	0	3	1.0
SUBTOTAL				48.0
GRASS - INVADED				
BROMUS TECTORUM	0	1	0	0.3
SUBTOTAL				0.3
SHRUB - PLANTED				
ARTEMISIA TRIDENTATA	0	1	0	0.3
ATRIPLEX CANESCENS	7	6	13	8.7
CERATOIDES LANATA	6	15	10	10.3
CHRYSOTHAMNUS NAUSEOSUS	0	0	10	3.3
PURSHIA TRIDENTATA	0	0	2	0.7
SUBTOTAL				23.3
SHRUB - INVADED				
KOCHIA PROSTRATA	0	0	4	1.3
SUBTOTAL				1.3
TOTAL PLANTED SPECIES				76.7
TOTAL INVADED SPECIES				2.3
GRAND TOTAL				79.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 4
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= HIGH SEEDING RATE (28 KG/HA)
MULCHING TREATMENT= NO MULCH

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	60	20	45	41.7
SUBTOTAL				41.7
GRASS - PLANTED				
AGROPYRON SPECIES	30	20	30	26.7
AGROPYRON TRICHOPHORUM	0	10	5	5.0
STIPA VIRIDULA	2	0	0	0.7
SUBTOTAL				32.3
SHRUB - PLANTED				
CERATOIDES LANATA	5	1	0	2.0
SUBTOTAL				2.0
TOTAL PLANTED SPECIES				76.0
TOTAL INVADED SPECIES				0.0
GRAND TOTAL				76.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 5
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= HIGH SEEDING RATE (28 KG/HA)
MULCHING TREATMENT= HYDROMULCH (1.7 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	18	25	40	27.7
SUBTOTAL				27.7
GRASS - PLANTED				
AGROPYRON SPECIES	30	20	15	21.7
AGROPYRON TRICHOPHORUM	0	5	10	5.0
BROMUS INERMIS	2	0	0	0.7
ORYZOPSIS HYMENOIDES	1	0	0	0.3
SUBTOTAL				27.7
SHRUB - PLANTED				
ATRIPLEX CANESCENS	3	2	0	1.7
CERATOIDES LANATA	1	0	0	0.3
CHRYSOTHAMNUS NAUSEOSUS	0	0	7	2.3
PURSHIA TRIDENTATA	0	5	1	2.0
SUBTOTAL				6.3
SHRUB - INVADED				
GUTIERREZIA SAROTHRAE	1	0	0	0.3
SUBTOTAL				0.3
TOTAL PLANTED SPECIES				61.7
TOTAL INVADED SPECIES				0.3
GRAND TOTAL				62.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 6
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= HIGH SEEDING RATE (28 KG/HA)
MULCHING TREATMENT= HAY (4.5 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	4	35	2	13.7
SUBTOTAL				13.7
GRASS - PLANTED				
AGROPYRON SPECIES	30	15	15	20.0
BROMUS INERMIS	3	4	8	5.0
ORYZOPSIS HYMENOIDES	2	2	0	1.3
SUBTOTAL				26.3
GRASS - INVADED				
PHLEUM PRATENSE	0	2	1	1.0
SUBTOTAL				1.0
SHRUB - PLANTED				
ARTEMISIA TRIDENTATA	0	0	11	3.7
ATRIPLEX CANESCENS	8	0	0	2.7
CERATOIDES LANATA	0	7	3	3.3
CHRYSOTHAMNUS NAUSEOSUS	15	0	0	5.0
PURSHIA TRIDENTATA	6	0	3	3.0
SUBTOTAL				17.7
TOTAL PLANTED SPECIES				57.7
TOTAL INVADED SPECIES				1.0
GRAND TOTAL				58.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 7
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= HIGH SEEDING RATE (28 KG/HA)
MULCHING TREATMENT= NO MULCH

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	10	8	0	6.0
MELILOTUS OFFICINALIS	0	0	2	0.7
SUBTOTAL				6.7
FORB - INVADED				
LEPTODACTYLON PUNGENS	0	0	2	0.7
SUBTOTAL				0.7
GRASS - PLANTED				
AGROPYRON SPECIES	15	18	20	17.7
ORYZOPSIS HYMENOIDES	0	5	0	1.7
STIPA VIRIDULA	8	0	0	2.7
SUBTOTAL				22.0
GRASS - INVADED				
BROMUS TECTORUM	0	0	2	0.7
SITANION HYSTRIX	0	3	0	1.0
SUBTOTAL				1.7
SHRUB - PLANTED				
ARTEMISIA TRIDENTATA	0	0	10	3.3
CERATOIDES LANATA	0	18	25	14.3
CHRYSOTHAMNUS NAUSEOSUS	30	12	0	14.0
PURSHIA TRIDENTATA	0	0	2	0.7
SUBTOTAL				32.3
SHRUB - INVADED				
GUTIERREZIA SAROTHRAE	3	2	0	1.7
KOCHIA PROSTRATA	1	0	0	0.3
SUBTOTAL				2.0
TOTAL PLANTED SPECIES				61.0
TOTAL INVADED SPECIES				4.3
GRAND TOTAL				65.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 8
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= HIGH SEEDING RATE (28 KG/HA)
MULCHING TREATMENT= HYDROMULCH (1.7 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	10	20	55	31.0
SUBTOTAL				31.0
FORB - INVADED				
UNKNOWN FORB	0	2	0	0.7
SUBTOTAL				0.7
GRASS - PLANTED				
AGROPYRON SPECIES	20	10	25	18.3
ORYZOPSIS HYMENOIDES	0	5	0	1.7
SUBTOTAL				20.0
SHRUB - PLANTED				
ATRIPLEX CANESCENS	0	4	0	1.3
CERATOIDES LANATA	0	0	15	5.0
CHRYSOTHAMNUS NAUSEOSUS	17	35	0	17.3
SUBTOTAL				23.7
SHRUB - INVADED				
GUTIERREZIA SAROTHRAE	8	2	0	3.3
SUBTOTAL				3.3
TOTAL PLANTED SPECIES				74.7
TOTAL INVADED SPECIES				4.0
GRAND TOTAL				78.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 9
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= HIGH SEEDING RATE (28 KG/HA)
MULCHING TREATMENT= HAY (4.5 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	0	1	20	7.0
SUBTOTAL				7.0
FORB - INVADED				
LEPTODACTYLON PUNGENS	4	0	0	1.3
SUBTOTAL				1.3
GRASS - PLANTED				
AGROPYRON SPECIES	10	5	25	13.3
BROMUS INERMIS	7	10	0	5.7
STIPA VIRIDULA	3	6	0	3.0
SUBTOTAL				22.0
GRASS - INVADED				
BROMUS TECTORUM	3	5	0	2.7
POA SPECIES	3	0	0	1.0
SUBTOTAL				3.7
SHRUB - PLANTED				
ATRIPLEX CANESCENS	0	12	14	8.7
CERATOIDES LANATA	0	0	15	5.0
CHRYSOTHAMNUS NAUSEOSUS	3	5	20	9.3
SUBTOTAL				23.0
SHRUB - INVADED				
GUTIERREZIA SAROTHRAE	1	5	0	2.0
KOCHIA PROSTRATA	18	0	0	6.0
SUBTOTAL				8.0
TOTAL PLANTED SPECIES				52.0
TOTAL INVADED SPECIES				13.0
GRAND TOTAL				65.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 10
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= HIGH SEEDING RATE (28 KG./HA)
MULCHING TREATMENT= HAY (4.5 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	50	35	2	29.0
SUBTOTAL				29.0
GRASS - PLANTED				
AGROPYRON SPECIES	10	30	20	20.0
AGROPYRON TRICHOPHORUM	0	15	10	8.3
ORYZOPSIS HYMENOIDES	0	0	1	0.3
STIPA VIRIDULA	3	0	0	1.0
SUBTOTAL				29.7
GRASS - INVADED				
POA SPECIES	2	0	0	0.7
SUBTOTAL				0.7
SHRUB - PLANTED				
ARTEMISIA TRIDENTATA	10	0	0	3.3
ATRIPLEX CANESCENS	0	1	3	1.3
CERATOIDES LANATA	0	4	1	1.7
CHRYSOTHAMNUS NAUSEOSUS	0	0	13	4.3
PURSHIA TRIDENTATA	0	0	1	0.3
SUBTOTAL				11.0
TOTAL PLANTED SPECIES				69.7
TOTAL INVADED SPECIES				0.7
GRAND TOTAL				70.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 11
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= HIGH SEEDING RATE (28 KG/HA)
MULCHING TREATMENT= HYDROMULCH (1.7 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	25	35	40	33.3
SUBTOTAL				33.3
FORB - INVADED				
UNKNOWN FORB	0	0	1	0.3
SUBTOTAL				0.3
GRASS - PLANTED				
AGROPYRON SPECIES	28	15	20	21.0
AGROPYRON TRICHOPHORUM	0	0	10	3.3
BROMUS INERMIS	2	0	0	0.7
ORYZOPSIS HYMENOIDES	2	1	1	1.3
SUBTOTAL				26.3
SHRUB - PLANTED				
ARTEMISIA TRIDENTATA	0	35	0	11.7
CERATOIDES LANATA	0	3	0	1.0
CHRYSOTHAMNUS NAUSEOSUS	12	0	0	4.0
SUBTOTAL				16.7
TOTAL PLANTED SPECIES				76.3
TOTAL INVADED SPECIES				0.3
GRAND TOTAL				76.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 12
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= HIGH SEEDING RATE (28 KG/HA)
MULCHING TREATMENT= NO MULCH

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	15	15	4	11.3
SUBTOTAL				11.3
GRASS - PLANTED				
AGROPYRON SPECIES	20	30	35	28.3
BROMUS INERMIS	0	2	1	1.0
ORYZOPSIS HYMENOIDES	2	0	0	0.7
SUBTOTAL				30.0
SHRUB - PLANTED				
PURSHIA TRIDENTATA	2	0	0	0.7
SUBTOTAL				0.7
TOTAL PLANTED SPECIES				42.0
TOTAL INVADED SPECIES				0.0
GRAND TOTAL				42.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 13
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= MEDIUM SEEDING RATE (22 KG/HA)
MULCHING TREATMENT= HYDROMULCH (1.7 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	25	40	15	26.7
SUBTOTAL				26.7
GRASS - PLANTED				
AGROPYRON SPECIES	10	10	10	10.0
AGROPYRON TRICHOPHORUM	3	15	10	9.3
ORYZOPSIS HYMENOIDES	5	0	0	1.7
STIPA VIRIDULA	0	0	3	1.0
SUBTOTAL				22.0
GRASS - INVADED				
AGROPYRON CRISTATUM	2	0	0	0.7
BROMUS TECTORUM	2	0	0	0.7
SUBTOTAL				1.3
SHRUB - PLANTED				
ATRIPLEX CANESCENS	0	55	15	23.3
CERATOIDES LANATA	0	2	0	0.7
CHRYSOTHAMNUS NAUSEOSUS	23	0	0	7.7
SUBTOTAL				31.7
SHRUB - INVADED				
GUTIERREZIA SAROTHRAE	1	0	2	1.0
SUBTOTAL				1.0
TOTAL PLANTED SPECIES				80.3
TOTAL INVADED SPECIES				2.3
GRAND TOTAL				82.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 14
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= MEDIUM SEEDING RATE (22 KG/HA)
MULCHING TREATMENT= HAY (4.5 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	30	28	0	19.3
LINUM LEWISII	2	0	0	0.7
SUBTOTAL				20.0
GRASS - PLANTED				
AGROPYRON SPECIES	10	15	30	18.3
SUBTOTAL				18.3
GRASS - INVADED				
AGROPYRON CRISTATUM	18	5	0	7.7
POA SPECIES	0	0	5	1.7
SUBTOTAL				9.3
SHRUB - PLANTED				
ARTEMISIA TRIDENTATA	0	0	20	6.7
ATRIPLEX CANESCENS	0	10	8	6.0
CERATOIDES LANATA	0	10	0	3.3
PURSHIA TRIDENTATA	0	0	2	0.7
SUBTOTAL				16.7
TOTAL PLANTED SPECIES				55.0
TOTAL INVADED SPECIES				9.3
GRAND TOTAL				64.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 15
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= MEDIUM SEEDING RATE (22 KG/HA)
MULCHING TREATMENT= NO MULCH

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	25	18	18	20.3
SUBTOTAL				20.3
GRASS - PLANTED				
AGROPYRON SPECIES	30	20	25	25.0
ORYZOPSIS HYMENOIDES	2	0	0	0.7
STIPA VIRIDULA	0	3	0	1.0
SUBTOTAL				26.7
GRASS - INVADED				
BROMUS TECTORUM	0	0	1	0.3
SUBTOTAL				0.3
SHRUB - PLANTED				
ATRIPLEX CANESCENS	0	6	0	2.0
CERATOIDES LANATA	10	10	13	11.0
SUBTOTAL				13.0
SHRUB - INVADED				
GUTIERREZIA SAROTHRAE	2	0	0	0.7
SUBTOTAL				0.7
TOTAL PLANTED SPECIES				60.0
TOTAL INVADED SPECIES				1.0
GRAND TOTAL				61.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 16
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= MEDIUM SEEDING RATE (22 KG/HA)
MULCHING TREATMENT= HAY (4.5 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	30	35	20	28.3
SUBTOTAL				28.3
GRASS - PLANTED				
AGROPYRON SPECIES	10	20	30	20.0
AGROPYRON TRICHOPHORUM	10	0	0	3.3
BROMUS INERMIS	2	0	0	0.7
SUBTOTAL				24.0
GRASS - INVADED				
AGROPYRON CRISTATUM	15	15	4	11.3
SUBTOTAL				11.3
SHRUB - PLANTED				
ARTEMISIA TRIDENTATA	0	0	12	4.0
CERATOIDES LANATA	0	0	3	1.0
SUBTOTAL				5.0
TOTAL PLANTED SPECIES				57.3
TOTAL INVADED SPECIES				11.3
GRAND TOTAL				<8.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 17
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= MEDIUM SEEDING RATE (22 KG/HA)
MULCHING TREATMENT= NO MULCH

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	2	10	8	6.7
LINUM LEWISII	1	0	0	0.3
MELILOTUS OFFICINALIS	0	3	4	2.3
SUBTOTAL				9.3
FORB - INVADED				
CRYPTANTHA SERICEA	1	2	0	1.0
LEPTODACTYLON PUNGENS	5	0	0	1.7
SENECIO MULTILOBATUS	2	0	0	0.7
SUBTOTAL				3.3
GRASS - PLANTED				
AGROPYRON SPECIES	30	25	12	22.3
ORYZOPSIS HYMENOIDES	0	3	5	2.7
SUBTOTAL				25.0
GRASS - INVADED				
AGROPYRON CRISTATUM	0	0	3	1.0
BROMUS TECTORUM	0	3	5	2.7
SITANION HYSTRIX	2	0	0	0.7
SUBTOTAL				4.3
SHRUB - PLANTED				
PURSHIA TRIDENTATA	0	3	0	1.0
SUBTOTAL				1.0
SHRUB - INVADED				
GUTIERREZIA SAROTHRAE	0	2	3	1.7
RHUS TRILOBATA	1	0	0	0.3
SUBTOTAL				2.0
TOTAL PLANTED SPECIES				35.3
TOTAL INVADED SPECIES				9.7
GRAND TOTAL				45.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 18
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= MEDIUM SEEDING RATE (22 KG/HA)
MULCHING TREATMENT= HAY (4.5 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	0	8	25	11.0
SUBTOTAL				11.0
FORB - INVADED				
UNKNOWN FORB	0	1	0	0.3
SUBTOTAL				0.3
GRASS - PLANTED				
AGROPYRON SPECIES	15	15	35	21.7
AGROPYRON TRICHOPHORUM	0	5	0	1.7
ORYZOPSIS HYMENOIDES	6	0	0	2.0
SUBTOTAL				25.3
GRASS - INVADED				
POA SPECIES	30	20	0	16.7
SITANION HYSTRIX	3	0	0	1.0
SUBTOTAL				17.7
SHRUB - PLANTED				
ATRIPLEX CANESCENS	8	0	1	3.0
CERATOIDES LANATA	0	0	4	1.3
CHRYSOTHAMNUS NAUSEOSUS	0	0	8	2.7
SUBTOTAL				7.0
TOTAL PLANTED SPECIES				43.3
TOTAL INVADED SPECIES				18.0
GRAND TOTAL				61.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 19
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= MEDIUM SEEDING RATE (22 KG/HA)
MULCHING TREATMENT= NO MULCH

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	0	3	5	2.7
SUBTOTAL				2.7
GRASS - PLANTED				
AGROPYRON SPECIES	15	25	25	21.7
STIPA VIRIDULA	2	5	2	3.0
SUBTOTAL				24.7
GRASS - INVADED				
SITANION HYSTRIX	3	0	0	1.0
SUBTOTAL				1.0
SHRUB - PLANTED				
ARTEMISIA TRIDENTATA	0	0	28	9.3
ATRIPLEX BONNEVILLENSIS	0	10	0	3.3
ATRIPLEX CANESCENS	0	0	3	1.0
CERATOIDES LANATA	0	10	5	5.0
CHRYSOTHAMNUS NAUSEOSUS	0	0	15	5.0
SUBTOTAL				23.3
SHRUB - INVADED				
GUTIERREZIA SAROTHRAE	12	0	0	4.0
KOCHIA PROSTRATA	8	0	0	2.7
SUBTOTAL				6.7
TOTAL PLANTED SPECIES				51.0
TOTAL INVADED SPECIES				7.7
GRAND TOTAL				58.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 20
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= MEDIUM SEEDING RATE (22 KG/HA)
MULCHING TREATMENT= HYDROMULCH (1.7 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	8	12	10	10.0
SUBTOTAL				10.0
FORB - INVADED				
LEPTODACTYLON PUNGENS	0	1	0	0.3
SPHAERALCEA COCCINEA	0	4	0	1.3
SUBTOTAL				1.7
GRASS - PLANTED				
AGROPYRON SPECIES	25	25	35	28.3
STIPA VIRIDULA	0	0	2	0.7
SUBTOTAL				29.0
SHRUB - PLANTED				
ARTEMISIA TRIDENTATA	15	0	0	5.0
ATRIPLEX CANESCENS	5	35	4	14.7
CERATOIDES LANATA	2	0	3	1.7
CHRYSOTHAMNUS NAUSEOSUS	40	0	0	13.3
PURSHIA TRIDENTATA	0	0	5	1.7
SUBTOTAL				36.3
TOTAL PLANTED SPECIES				75.3
TOTAL INVADED SPECIES				1.7
GRAND TOTAL				77.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 21
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= MEDIUM SEEDING RATE (22 KG/HA)
MULCHING TREATMENT= HAY (4.5 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	45	0	25	23.3
SUBTOTAL				23.3
FORB - INVADED				
SPHAERALCEA COCCINEA	0	1	0	0.3
SUBTOTAL				0.3
GRASS - PLANTED				
AGROPYRON SPECIES	15	30	25	23.3
AGROPYRON TRICHOPHORUM	0	0	10	3.3
ORYZOPSIS HYMENOIDES	0	0	2	0.7
STIPA VIRIDULA	5	0	0	1.7
SUBTOTAL				29.0
GRASS - INVADED				
AGROPYRON CRISTATUM	0	5	0	1.7
BROMUS TECTORUM	1	0	0	0.3
SITANION HYSTRIX	3	0	0	1.0
SUBTOTAL				3.0
SHRUB - PLANTED				
ATRIPLEX CANESCENS	3	25	8	12.0
CERATOIDES LANATA	15	0	10	8.3
SUBTOTAL				20.3
TOTAL PLANTED SPECIES				72.7
TOTAL INVADED SPECIES				3.3
GRAND TOTAL				76.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 22
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= MEDIUM SEEDING RATE (22 KG/HA)
MULCHING TREATMENT= HYDROMULCH (1.7 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	5	30	30	21.7
PENSTEMON STRICTUS	0	0	1	0.3
SUBTOTAL				22.0
GRASS - PLANTED				
AGROPYRON SPECIES	10	30	30	23.3
ORYZOPSIS HYMENOIDES	8	0	0	2.7
STIPA VIRIDULA	0	2	0	0.7
SUBTOTAL				26.7
GRASS - INVADED				
BROMUS TECTORUM	2	0	0	0.7
SUBTOTAL				0.7
SHRUB - PLANTED				
ATRIPLEX CANESCENS	0	0	5	1.7
CERATOIDES LANATA	12	9	10	10.3
CERCOCARPUS MONTANUS	2	0	0	0.7
PURSHIA TRIDENTATA	0	3	0	1.0
SUBTOTAL				13.7
SHRUB - INVADED				
KOCHIA PROSTRATA	0	2	0	0.7
SUBTOTAL				0.7
TOTAL PLANTED SPECIES				62.3
TOTAL INVADED SPECIES				1.3
GRAND TOTAL				63.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 23
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= MEDIUM SEEDING RATE (22 KG/HA)
MULCHING TREATMENT= HYDROMULCH (1.7 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	15	25	10	16.7
LINUM LEWISII	0	0	1	0.3
SUBTOTAL				17.0
GRASS - PLANTED				
AGROPYRON SPECIES	10	25	30	21.7
AGROPYRON TRICHOPHORUM	0	5	0	1.7
ORYZOPSIS HYMENOIDES	0	0	4	1.3
SUBTOTAL				24.7
GRASS - INVADED				
AGROPYRON CRISTATUM	8	2	0	3.3
BROMUS TECTORUM	3	0	2	1.7
SITANION HYSTRIX	3	0	0	1.0
SUBTOTAL				6.0
SHRUB - PLANTED				
ATRIPLEX CANESCENS	0	5	4	3.0
CERATOIDES LANATA	10	3	2	5.0
CHRYSOTHAMNUS NAUSEOSUS	5	0	10	7.7
PURSHIA TRIDENTATA	0	0	2	0.7
SUBTOTAL				16.3
TOTAL PLANTED SPECIES				58.0
TOTAL INVADED SPECIES				6.0
GRAND TOTAL				64.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 24
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= MEDIUM SEEDING RATE (22 KG./HA)
MULCHING TREATMENT= NO MULCH

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	2	20	25	15.7
SUBTOTAL				15.7
FORB - INVADED				
PHYSARIA FLORIBUNDA	1	0	0	0.3
SUBTOTAL				0.3
GRASS - PLANTED				
AGROPYRON SPECIES	25	30	40	31.7
BROMUS INERMIS	0	2	2	1.3
ORYZOPSIS HYMENOIDES	2	2	0	1.3
SUBTOTAL				34.3
SHRUB - PLANTED				
CERATOIDES LANATA	12	5	6	7.7
PURSHIA TRIDENTATA	0	4	2	2.0
SUBTOTAL				9.7
SHRUB - INVADED				
GUTIERREZIA SAROTHRAE	1	1	0	0.7
SUBTOTAL				0.7
TOTAL PLANTED SPECIES				59.7
TOTAL INVADED SPECIES				1.0
GRAND TOTAL				60.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 25
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= LOW SEEDING RATE (17 KG/HA)
MULCHING TREATMENT= HAY (4.5 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	0	8	25	11.0
LINUM LEWISII	0	1	0	0.3
SUBTOTAL				11.3
GRASS - PLANTED				
AGROPYRON SPECIES	15	30	25	23.3
AGROPYRON TRICHOPHORUM	5	0	0	1.7
BROMUS INERMIS	12	10	3	8.3
STIPA VIRIDULA	0	2	0	0.7
SUBTOTAL				34.0
GRASS - INVADED				
AGROPYRON CRISTATUM	5	5	0	3.3
SUBTOTAL				3.3
SHRUB - PLANTED				
ARTEMISIA TRIDENTATA	10	0	0	3.3
ATRIPLEX CANESCENS	0	0	35	11.7
CERATOIDES LANATA	8	12	0	6.7
CHRYSOTHAMNUS NAUSEOSUS	0	0	8	2.7
SUBTOTAL				24.3
TOTAL PLANTED SPECIES				69.7
TOTAL INVADED SPECIES				3.3
GRAND TOTAL				73.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 26
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= LOW SEEDING RATE (17 KG/HA)
MULCHING TREATMENT= HAY (4.5 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	0	12	18	10.0
SUBTOTAL				10.0
GRASS - PLANTED				
AGROPYRON SPECIES	10	30	25	21.7
AGROPYRON TRICHOPHORUM	5	0	5	3.3
BROMUS INERMIS	2	0	3	1.7
SUBTOTAL				26.7
GRASS - INVADED				
AGROPYRON CRISTATUM	12	3	5	6.7
SUBTOTAL				6.7
SHRUB - PLANTED				
ATRIPLEX CANESCENS	0	25	6	10.3
CERATOIDES LANATA	0	3	1	1.3
CHRYSOTHAMNUS NAUSEOSUS	18	4	0	7.3
PURSHIA TRIDENTATA	0	0	6	2.0
SUBTOTAL				21.0
TOTAL PLANTED SPECIES				57.7
TOTAL INVADED SPECIES				6.7
GRAND TOTAL				64.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 27
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= LOW SEEDING RATE (17 KG/HA)
MULCHING TREATMENT= NO MULCH

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	20	40	12	24.0
SUBTOTAL				24.0
FORB - INVADED				
MACHAERANTHERA PATTERSONII	0	0	1	0.3
SUBTOTAL				0.3
GRASS - PLANTED				
AGROPYRON SPECIES	35	35	15	28.3
AGROPYRON TRICHOPHORUM	0	0	5	1.7
ORYZOPSIS HYMENOIDES	0	0	5	1.7
STIPA VIRIDULA	2	0	3	1.7
SUBTOTAL				33.3
SHRUB - PLANTED				
CERATOIDES LANATA	7	2	0	3.0
CHRYSOTHAMNUS NAUSEOSUS	0	0	9	3.0
SUBTOTAL				6.0
SHRUB - INVADED				
KOCHIA PROSTRATA	3	0	0	1.0
SUBTOTAL				1.0
TOTAL PLANTED SPECIES				63.3
TOTAL INVADED SPECIES				1.3
GRAND TOTAL				64.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 28
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= LOW SEEDING RATE (17 KG/HA)
MULCHING TREATMENT= HYDROMULCH (1.7 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	18	1	60	26.3
SUBTOTAL				26.3
FORB - INVADED				
MACHAERANTHERA PATTERSONII	1	0	0	0.3
SUBTOTAL				0.3
GRASS - PLANTED				
AGROPYRON SPECIES	12	18	20	16.7
AGROPYRON TRICHOPHORUM	4	7	0	3.7
ORYZOPSIS HYMENOIDES	0	3	0	1.0
STIPA VIRIDULA	4	5	2	3.7
SUBTOTAL				25.0
GRASS - INVADED				
AGROPYRON CRISTATUM	4	2	3	3.0
SUBTOTAL				3.0
SHRUB - PLANTED				
ATRIPLEX CANESCENS	10	0	0	3.3
CERATOIDES LANATA	0	1	0	0.3
SUBTOTAL				3.7
TOTAL PLANTED SPECIES				55.0
TOTAL INVADED SPECIES				3.3
GRAND TOTAL				58.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 29
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= LOW SEEDING RATE (17 KG./HA)
MULCHING TREATMENT= HYDROMULCH (1.7 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	4	20	12	12.0
SUBTOTAL				12.0
FORB - INVADED				
MACHAERANTHERA PATTERSONII	1	0	0	0.3
PHYSARIA FLORIBUNDA	0	0	1	0.3
SUBTOTAL				0.7
GRASS - PLANTED				
AGROPYRON SPECIES	25	25	15	21.7
ORYZOPSIS HYMENOIDES	0	0	5	1.7
STIPA VIRIDULA	0	0	5	1.7
SUBTOTAL				25.0
GRASS - INVADED				
AGROPYRON CRISTATUM	5	5	0	3.3
SUBTOTAL				3.3
SHRUB - PLANTED				
ATRIPLEX CANESCENS	0	7	0	2.3
CHRYSOTHAMNUS NAUSEOSUS	0	0	1	0.3
PURSHIA TRIDENTATA	3	1	0	1.3
SUBTOTAL				4.0
TOTAL PLANTED SPECIES				41.0
TOTAL INVADED SPECIES				4.0
GRAND TOTAL				45.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 30
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= LOW SEEDING RATE (17 KG/HA)
MULCHING TREATMENT= NO MULCH

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	70	20	12	34.0
SUBTOTAL				34.0
GRASS - PLANTED				
AGROPYRON SPECIES	15	30	40	28.3
SUBTOTAL				28.3
GRASS - INVADED				
AGROPYRON CRISTATUM	0	3	0	1.0
SUBTOTAL				1.0
SHRUB - PLANTED				
ATRIPLEX CANESCENS	0	12	8	6.7
CERATOIDES LANATA	18	0	9	9.0
PURSHIA TRIDENTATA	0	3	0	1.0
SUBTOTAL				16.7
TOTAL PLANTED SPECIES				79.0
TOTAL INVADED SPECIES				1.0
GRAND TOTAL				80.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON
EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 31
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= LOW SEEDING RATE (17 KG/HA)
MULCHING TREATMENT= NO MULCH

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	0	35	10	15.0
SUBTOTAL				15.0
GRASS - PLANTED				
AGROPYRON SPECIES	55	20	40	38.3
AGROPYRON TRICHOPHORUM	0	0	10	3.3
SUBTOTAL				41.7
TOTAL PLANTED SPECIES				56.7
TOTAL INVADED SPECIES				0.0
GRAND TOTAL				56.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 32
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= LOW SEEDING RATE (17 KG/HA)
MULCHING TREATMENT= HYDROMULCH (1.7 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	11	5	10	8.7
SUBTOTAL				8.7
GRASS - PLANTED				
AGROPYRON SPECIES	20	20	15	18.3
ORYZOPSIS HYMENOIDES	3	0	0	1.0
SUBTOTAL				19.3
GRASS - INVADED				
AGROPYRON CRISTATUM	0	3	0	1.0
SUBTOTAL				1.0
SHRUB - PLANTED				
ATRIPLEX CANESCENS	0	2	0	0.7
CHRYSOTHAMNUS NAUSEOSUS	0	0	80	26.7
PURSHIA TRIDENTATA	10	1	0	3.7
SUBTOTAL				31.0
SHRUB - INVADED				
GUTIERREZIA SAROTHRAE	1	3	0	1.3
SUBTOTAL				1.3
TOTAL PLANTED SPECIES				59.0
TOTAL INVADED SPECIES				2.3
GRAND TOTAL				61.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 33
SUBSTRATE TREATMENT= PROCESSED SHALE
SEEDING TREATMENT= LOW SEEDING RATE (17 KG/HA)
MULCHING TREATMENT= HYDROMULCH (1.7 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	0	0	12	4.0
SUBTOTAL				4.0
FORB - INVADED				
CRYPTANTHA SERICEA	0	1	0	0.3
PHYSARIA FLORIBUNDA	0	1	0	0.3
SUBTOTAL				0.7
GRASS - PLANTED				
AGROPYRON SPECIES	18	5	10	11.0
ORYZOPSIS HYMENOIDES	3	3	0	2.0
SUBTOTAL				13.0
SHRUB - PLANTED				
CERATOIDES LANATA	0	0	15	5.0
CHRYSOTHAMNUS NAUSEOSUS	0	45	35	26.7
PURSHIA TRIDENTATA	0	4	0	1.3
SUBTOTAL				33.0
SHRUB - INVADED				
GUTIERREZIA SAROTHRAE	5	0	0	1.7
KOCHIA PROSTRATA	0	2	0	0.7
SUBTOTAL				2.3
TOTAL PLANTED SPECIES				50.0
TOTAL INVADED SPECIES				3.0
GRAND TOTAL				53.0

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 34
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= LOW SEEDING RATE (17 KG/HA)
MULCHING TREATMENT= NO MULCH

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	0	15	25	13.3
LINUM LEWISII	0	1	0	0.3
SUBTOTAL				13.7
GRASS - PLANTED				
AGROPYRON SPECIES	5	12	18	11.7
BROMUS INERMIS	8	1	0	3.0
ORYZOPSIS HYMENOIDES	3	2	0	1.7
STIPA VIRIDULA	2	1	0	1.0
SUBTOTAL				17.3
SHRUB - PLANTED				
ATRIPLEX CANESCENS	0	35	8	14.3
CERATOIDES LANATA	0	0	3	1.0
CHRYSOTHAMNUS NAUSEOSUS	1	1	12	4.7
PURSHIA TRIDENTATA	4	0	0	1.3
SUBTOTAL				21.3
SHRUB - INVADED				
GUTIERREZIA SAROTHRAE	3	0	0	1.0
SUBTOTAL				1.0
TOTAL PLANTED SPECIES				52.3
TOTAL INVADED SPECIES				1.0
GRAND TOTAL				53.3

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 35
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= LOW SEEDING RATE (17 KG/HA)
MULCHING TREATMENT= HAY (4.5 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	5	20	6	10.3
SUBTOTAL				10.3
FORB - INVADED				
MACHAERANTHERA PATTERSONII	1	0	0	0.3
SENECIO MULTILOBATUS	1	0	0	0.3
SUBTOTAL				0.7
GRASS - PLANTED				
AGROPYRON SPECIES	5	15	10	10.0
BROMUS INERMIS	0	0	3	1.0
SUBTOTAL				11.0
GRASS - INVADED				
AGROPYRON CRISTATUM	25	10	10	15.0
SUBTOTAL				15.0
SHRUB - PLANTED				
ATRIPLEX CANESCENS	12	3	0	5.0
CHRYSOTHAMNUS NAUSEOSUS	20	0	25	15.0
PURSHIA TRIDENTATA	0	5	0	1.7
SUBTOTAL				21.7
TOTAL PLANTED SPECIES				43.0
TOTAL INVADED SPECIES				15.7
GRAND TOTAL				58.7

APPENDIX . PERCENT COVER OF PLANT SPECIES SAMPLED ON EXPERIMENTAL REVEGETATION PLOT R-3
REPORT YEAR= 1985

SAMPLE PLOT NUMBER= 36
SUBSTRATE TREATMENT= NO PROCESSED SHALE
SEEDING TREATMENT= LOW SEEDING RATE (17 KG/HA)
MULCHING TREATMENT= HAY (4.5 MT/HA)

SPECIES	SUBPLOTS #4	#5	#6	TREATMENT PLOT AVERAGE
FORB - PLANTED				
ASTRAGALUS CICER	0	35	30	24.3
SUBTOTAL				24.3
FORB - INVADED				
CHAENACTIS DOUGLASII	0	0	2	0.7
SUBTOTAL				0.7
GRASS - PLANTED				
AGROPYRON SPECIES	20	25	40	28.3
STIPA VIRIDULA	4	0	0	1.3
SUBTOTAL				29.7
GRASS - INVADED				
AGROPYRON CRISTATUM	3	0	0	1.0
SUBTOTAL				1.0
SHRUB - PLANTED				
ARTEMISIA TRIDENTATA	0	8	15	7.7
ATRIPLEX CANESCENS	16	15	0	10.3
CERATOIDES LANATA	0	5	12	5.7
PURSHIA TRIDENTATA	3	0	0	1.0
SUBTOTAL				24.7
TOTAL PLANTED SPECIES				78.7
TOTAL INVADED SPECIES				1.7
GRAND TOTAL				80.3

Plot R-3 Experimental Revegetation Soil Moisture Data

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R3 SOIL MOISTURE ANALYSIS

REPORT YEAR= 1985 SAMPLE MONTH= MAY

PLOT	SUBSTRATE TREATMENT	SEEDING TREATMENT	MULCHING TREATMENT	MOISTURE READINGS TOP DIR	TOP COR	MIDDLE DIR	MIDDLE COR	BOTTOM DIR	BOTTOM COR
1	PROCESSED SHALE	HIGH SEEDING	HAY MULCH	35.3	26.5	35.8	35.8	39.1	25.2
2	PROCESSED SHALE	HIGH SEEDING	NO MULCH	32.9	25.3	35.9	35.9	37.1	24.3
3	PROCESSED SHALE	HIGH SEEDING	HYDROMULCH	34.3	26.6	34.8	34.8	37.1	28.5
4	NO SHALE	HIGH SEEDING	NO MULCH	36.4	26.8	38.9	38.9	41.2	26.4
5	NO SHALE	HIGH SEEDING	HYDROMULCH	35.5	28.9	37.0	37.0	39.6	24.1
6	NO SHALE	HIGH SEEDING	HAY MULCH	33.8	26.6	37.2	37.2	39.1	29.3
7	PROCESSED SHALE	HIGH SEEDING	NO MULCH	35.2	26.6	33.6	33.6	36.2	24.7
8	PROCESSED SHALE	HIGH SEEDING	HYDROMULCH	33.0	23.9	33.1	33.1	36.4	27.3
9	PROCESSED SHALE	HIGH SEEDING	HAY MULCH	34.3	26.0	34.9	34.9	38.5	28.7
10	NO SHALE	HIGH SEEDING	HAY MULCH	31.6	23.8	32.8	32.8	36.4	23.5
11	NO SHALE	HIGH SEEDING	HYDROMULCH	36.1	27.0	35.7	35.7	28.6	16.4
12	NO SHALE	HIGH SEEDING	NO MULCH	35.2	28.2	39.5	39.5	32.8	21.9
13	PROCESSED SHALE	MEDIUM SEEDING	HYDROMULCH	35.0	26.1	32.0	32.0	32.2	24.7
14	PROCESSED SHALE	MEDIUM SEEDING	HAY MULCH	31.0	22.6	31.4	31.4	30.4	22.1
15	PROCESSED SHALE	MEDIUM SEEDING	NO MULCH	33.2	24.6	31.9	31.9	34.6	26.5
16	NO SHALE	MEDIUM SEEDING	HAY MULCH	32.0	23.4	33.6	33.6	34.1	24.9
17	NO SHALE	MEDIUM SEEDING	NO MULCH	31.6	24.1	36.7	36.7	37.4	24.3
18	NO SHALE	MEDIUM SEEDING	HAY MULCH	33.7	24.2	39.1	39.1	27.4	19.7
19	PROCESSED SHALE	MEDIUM SEEDING	NO MULCH	35.5	25.4	33.2	33.2	31.9	24.1
20	PROCESSED SHALE	MEDIUM SEEDING	HYDROMULCH	35.2	27.2	32.5	32.5	32.3	26.0
21	PROCESSED SHALE	MEDIUM SEEDING	HAY MULCH	33.2	25.4	34.9	34.9	31.6	22.5
22	NO SHALE	MEDIUM SEEDING	HYDROMULCH	32.4	23.9	32.7	32.7	33.7	24.2
23	NO SHALE	MEDIUM SEEDING	HYDROMULCH	33.7	25.7	36.2	36.2	34.8	25.0
24	NO SHALE	MEDIUM SEEDING	NO MULCH	36.7	27.6	37.5	37.5	34.9	27.9
25	PROCESSED SHALE	LOW SEEDING	HAY MULCH	32.1	24.0	30.7	30.7	28.1	21.0
26	PROCESSED SHALE	LOW SEEDING	HAY MULCH	31.9	24.4	33.9	33.9	32.0	23.9
27	PROCESSED SHALE	LOW SEEDING	NO MULCH	31.9	24.5	34.1	34.1	30.2	20.8
28	NO SHALE	LOW SEEDING	HYDROMULCH	33.6	25.6	34.4	34.4	31.8	22.1
29	NO SHALE	LOW SEEDING	HYDROMULCH	32.3	24.4	33.3	33.3	31.3	21.5
30	NO SHALE	LOW SEEDING	NO MULCH	34.7	25.2	34.0	34.0	35.7	22.2
31	PROCESSED SHALE	LOW SEEDING	NO MULCH	32.6	22.8	33.9	33.9	34.5	26.2
32	PROCESSED SHALE	LOW SEEDING	HYDROMULCH	35.2	27.7	33.8	33.8	28.3	19.6
33	PROCESSED SHALE	LOW SEEDING	HYDROMULCH	33.2	24.6	35.4	35.4	32.0	22.3
34	NO SHALE	LOW SEEDING	NO MULCH	34.9	25.5	33.4	33.4	32.5	21.7
35	NO SHALE	LOW SEEDING	HAY MULCH	32.6	24.4	32.5	32.5	31.2	21.5
36	NO SHALE	LOW SEEDING	HAY MULCH	34.2	27.0	35.5	35.5	35.3	25.2

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R3 SOIL MOISTURE ANALYSIS

PLOT	SUBSTRATE TREATMENT	SEEDING TREATMENT	MULCHING TREATMENT	MOISTURE READINGS TOP DIR	TOP COR	MIDDLE DIR	MIDDLE COR	BOTTOM DIR	BOTTOM COR
REPORT YEAR= 1985		SAMPLE MONTH= JUNE							
1	PROCESSED SHALE	HIGH SEEDING	HAY MULCH	31.8	23.0	31.7	31.7	38.5	24.6
2	PROCESSED SHALE	HIGH SEEDING	NO MULCH	29.2	21.6	33.7	33.7	35.3	22.5
3	PROCESSED SHALE	HIGH SEEDING	HYDROMULCH	30.3	22.6	32.4	32.4	34.2	25.6
4	NO SHALE	HIGH SEEDING	NO MULCH	30.5	20.9	34.8	34.8	38.9	24.1
5	NO SHALE	HIGH SEEDING	HYDROMULCH	30.2	23.6	35.4	35.4	36.1	20.6
6	NO SHALE	HIGH SEEDING	HAY MULCH	29.1	21.9	36.0	36.0	37.1	27.3
7	PROCESSED SHALE	HIGH SEEDING	NO MULCH	29.6	21.0	31.1	31.1	37.1	25.6
8	PROCESSED SHALE	HIGH SEEDING	HYDROMULCH	29.3	20.2	32.0	32.0	35.5	26.4
9	PROCESSED SHALE	HIGH SEEDING	HAY MULCH	28.3	20.0	31.6	31.6	40.2	30.4
10	NO SHALE	HIGH SEEDING	HAY MULCH	31.0	23.2	32.3	32.3	35.5	22.6
11	NO SHALE	HIGH SEEDING	HYDROMULCH	31.6	22.5	35.3	35.3	29.7	16.5
12	NO SHALE	HIGH SEEDING	NO MULCH	28.3	21.3	36.5	36.5	33.2	22.3
13	PROCESSED SHALE	MEDIUM SEEDING	HYDROMULCH	28.2	19.3	28.5	28.5	29.1	21.6
14	PROCESSED SHALE	MEDIUM SEEDING	HAY MULCH	23.5	15.1	26.5	26.5	27.5	19.2
15	PROCESSED SHALE	MEDIUM SEEDING	NO MULCH	25.8	17.2	28.3	28.3	34.7	26.6
16	NO SHALE	MEDIUM SEEDING	HAY MULCH	28.5	19.9	33.6	33.6	33.5	23.4
17	NO SHALE	MEDIUM SEEDING	NO MULCH	28.1	20.6	33.9	33.9	36.8	23.7
18	NO SHALE	MEDIUM SEEDING	HAY MULCH	30.9	21.4	33.9	33.9	28.7	21.9
19	PROCESSED SHALE	MEDIUM SEEDING	NO MULCH	29.1	19.0	31.2	31.2	30.7	20.9
20	PROCESSED SHALE	MEDIUM SEEDING	HYDROMULCH	28.6	20.6	28.7	28.7	31.9	25.6
21	PROCESSED SHALE	MEDIUM SEEDING	HAY MULCH	27.2	19.4	30.4	30.4	30.5	21.4
22	NO SHALE	MEDIUM SEEDING	HYDROMULCH	27.6	19.1	32.9	32.9	33.0	23.5
23	NO SHALE	MEDIUM SEEDING	HYDROMULCH	28.2	20.2	32.3	32.3	35.1	25.1
24	NO SHALE	MEDIUM SEEDING	NO MULCH	31.2	22.1	36.9	36.9	34.3	27.3
25	PROCESSED SHALE	LOW SEEDING	HAY MULCH	26.2	18.1	27.8	27.8	26.3	19.2
26	PROCESSED SHALE	LOW SEEDING	HAY MULCH	27.4	19.9	30.7	30.7	30.9	21.9
27	PROCESSED SHALE	LOW SEEDING	NO MULCH	28.1	20.7	32.9	32.9	29.3	19.9
28	NO SHALE	LOW SEEDING	HYDROMULCH	28.2	20.2	31.2	31.2	30.1	20.6
29	NO SHALE	LOW SEEDING	HYDROMULCH	28.1	20.2	32.5	32.5	30.5	20.5
30	NO SHALE	LOW SEEDING	NO MULCH	30.0	20.5	31.3	31.3	35.2	24.7
31	PROCESSED SHALE	LOW SEEDING	NO MULCH	26.8	17.0	30.5	30.5	35.7	27.6
32	PROCESSED SHALE	LOW SEEDING	HYDROMULCH	26.3	18.3	29.7	29.7	27.5	18.3
33	PROCESSED SHALE	LOW SEEDING	HYDROMULCH	26.1	17.5	32.0	32.0	29.7	20.5
34	NO SHALE	LOW SEEDING	NO MULCH	29.5	20.1	32.1	32.1	30.3	19.5
35	NO SHALE	LOW SEEDING	HAY MULCH	29.8	21.6	32.6	32.6	32.7	23.0
36	NO SHALE	LOW SEEDING	HAY MULCH	31.1	23.9	34.4	34.4	35.7	25.3

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R3 SOIL MOISTURE ANALYSIS

PLOT	SUBSTRATE TREATMENT	SEEDING TREATMENT	MULCHING TREATMENT	MOISTURE READINGS TOP DIR	TOP COR	MIDDLE DIR	MIDDLE COR	BOTTOM DIR	BOTTOM COR
REPORT YEAR= 1985			SAMPLE MONTH= JULY						
1	PROCESSED SHALE	HIGH SEEDING	HAY MULCH	17.6	8.8	23.8	23.8	36.1	22.2
2	PROCESSED SHALE	HIGH SEEDING	NO MULCH	16.8	9.2	24.6	24.6	27.5	14.9
3	PROCESSED SHALE	HIGH SEEDING	HYDROMULCH	18.0	10.3	25.3	25.3	27.2	18.6
4	NO SHALE	HIGH SEEDING	NO MULCH	21.0	11.4	30.9	30.9	32.9	18.1
5	NO SHALE	HIGH SEEDING	HYDROMULCH	17.6	11.0	29.3	29.3	30.0	14.5
6	NO SHALE	HIGH SEEDING	HAY MULCH	16.7	9.5	29.9	29.9	32.1	22.5
7	PROCESSED SHALE	HIGH SEEDING	NO MULCH	19.8	11.2	26.4	26.4	36.2	29.7
8	PROCESSED SHALE	HIGH SEEDING	HYDROMULCH	17.4	8.3	22.4	22.4	27.6	16.5
9	PROCESSED SHALE	HIGH SEEDING	HAY MULCH	21.0	12.7	25.2	25.2	33.9	24.1
10	NO SHALE	HIGH SEEDING	HAY MULCH	21.0	13.2	27.1	27.1	30.3	17.1
11	NO SHALE	HIGH SEEDING	HYDROMULCH	21.8	12.7	28.0	28.0	29.0	16.0
12	NO SHALE	HIGH SEEDING	NO MULCH	16.8	9.8	23.2	23.2	29.6	18.7
13	PROCESSED SHALE	MEDIUM SEEDING	HYDROMULCH	19.0	10.1	20.9	20.9	21.7	14.1
14	PROCESSED SHALE	MEDIUM SEEDING	HAY MULCH	15.4	7.0	17.8	17.8	20.6	12.3
15	PROCESSED SHALE	MEDIUM SEEDING	NO MULCH	16.3	7.7	18.8	18.8	33.6	24.9
16	NO SHALE	MEDIUM SEEDING	HAY MULCH	18.2	9.6	26.9	26.9	28.2	18.1
17	NO SHALE	MEDIUM SEEDING	NO MULCH	18.0	10.5	27.4	27.4	31.8	18.7
18	NO SHALE	MEDIUM SEEDING	HAY MULCH	22.6	13.1	27.5	27.5	27.3	20.1
19	PROCESSED SHALE	MEDIUM SEEDING	NO MULCH	17.6	7.5	24.5	24.5	23.6	15.8
20	PROCESSED SHALE	MEDIUM SEEDING	HYDROMULCH	18.6	10.6	23.7	23.7	29.4	23.1
21	PROCESSED SHALE	MEDIUM SEEDING	HAY MULCH	16.7	8.9	22.3	22.3	26.8	17.7
22	NO SHALE	MEDIUM SEEDING	HYDROMULCH	17.3	8.8	27.3	27.3	28.7	18.9
23	NO SHALE	MEDIUM SEEDING	HYDROMULCH	19.2	11.2	27.7	27.7	30.6	20.0
24	NO SHALE	MEDIUM SEEDING	NO MULCH	19.1	10.0	27.9	27.0	31.3	24.3
25	PROCESSED SHALE	LOW SEEDING	HAY MULCH	16.2	8.1	21.3	21.3	24.1	17.9
26	PROCESSED SHALE	LOW SEEDING	HAY MULCH	17.9	10.4	25.3	25.3	27.3	19.1
27	PROCESSED SHALE	LOW SEEDING	NO MULCH	16.8	9.4	26.0	26.0	27.6	18.2
28	NO SHALE	LOW SEEDING	HYDROMULCH	18.4	10.4	26.8	26.8	27.9	18.4
29	NO SHALE	LOW SEEDING	HYDROMULCH	17.3	9.4	28.5	28.5	27.0	17.3
30	NO SHALE	LOW SEEDING	NO MULCH	16.7	7.2	24.9	24.9	30.6	17.1
31	PROCESSED SHALE	LOW SEEDING	NO MULCH	16.0	6.2	23.0	23.0	33.8	25.7
32	PROCESSED SHALE	LOW SEEDING	HYDROMULCH	15.0	7.5	25.9	25.9	25.2	16.5
33	PROCESSED SHALE	LOW SEEDING	HYDROMULCH	18.6	10.0	27.5	27.5	27.2	18.0
34	NO SHALE	LOW SEEDING	NO MULCH	19.1	9.7	26.8	26.8	27.6	16.6
35	NO SHALE	LOW SEEDING	HAY MULCH	17.7	9.5	29.4	29.4	29.5	19.8
36	NO SHALE	LOW SEEDING	HAY MULCH	17.8	10.6	30.1	30.1	30.2	20.1

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R3 SOIL MOISTURE ANALYSIS

PLOT	SUBSTRATE TREATMENT	SEEDING TREATMENT	MULCHING TREATMENT	MOISTURE READINGS TOP DIR	TOP COR	MIDDLE DIR	MIDDLE COR	BOTTOM DIR	BOTTOM COR
REPORT YEAR= 1985		SAMPLE MONTH= AUGUST							
1	PROCESSED SHALE	HIGH SEEDING	HAY MULCH	15.7	6.9	21.7	21.7	34.1	20.2
2	PROCESSED SHALE	HIGH SEEDING	NO MULCH	14.4	6.8	22.3	22.3	26.2	13.4
3	PROCESSED SHALE	HIGH SEEDING	HYDROMULCH	16.5	8.8	21.2	21.2	23.6	15.0
4	NO SHALE	HIGH SEEDING	NO MULCH	19.4	9.8	26.6	26.6	29.5	14.7
5	NO SHALE	HIGH SEEDING	HYDROMULCH	16.5	9.9	25.1	25.1	25.5	10.0
6	NO SHALE	HIGH SEEDING	HAY MULCH	15.2	8.0	26.7	26.7	31.0	21.2
7	PROCESSED SHALE	HIGH SEEDING	NO MULCH	16.8	8.2	22.8	22.8	32.9	21.4
8	PROCESSED SHALE	HIGH SEEDING	HYDROMULCH	15.9	6.8	20.6	20.6	27.7	18.6
9	PROCESSED SHALE	HIGH SEEDING	HAY MULCH	16.4	8.1	21.1	21.1	31.0	21.2
10	NO SHALE	HIGH SEEDING	HAY MULCH	15.4	7.6	24.3	24.3	27.7	14.8
11	NO SHALE	HIGH SEEDING	HYDROMULCH	17.3	8.2	25.5	25.5	29.4	17.2
12	NO SHALE	HIGH SEEDING	NO MULCH	14.4	7.4	21.1	21.1	28.7	17.8
13	PROCESSED SHALE	MEDIUM SEEDING	HYDROMULCH	15.7	6.8	18.8	18.8	17.8	10.3
14	PROCESSED SHALE	MEDIUM SEEDING	HAY MULCH	14.1	5.7	15.0	15.0	19.4	11.1
15	PROCESSED SHALE	MEDIUM SEEDING	NO MULCH	15.1	6.5	17.6	17.6	29.6	21.5
16	NO SHALE	MEDIUM SEEDING	HAY MULCH	16.2	7.6	24.2	24.2	24.7	14.6
17	NO SHALE	MEDIUM SEEDING	NO MULCH	14.7	7.2	24.8	24.8	28.9	15.8
18	NO SHALE	MEDIUM SEEDING	HAY MULCH	15.9	6.4	23.6	23.6	29.0	21.7
19	PROCESSED SHALE	MEDIUM SEEDING	NO MULCH	14.2	4.1	20.8	20.8	20.6	12.8
20	PROCESSED SHALE	MEDIUM SEEDING	HYDROMULCH	15.6	7.6	21.3	21.3	25.8	19.5
21	PROCESSED SHALE	MEDIUM SEEDING	HAY MULCH	14.9	7.1	20.9	20.9	23.1	14.6
22	NO SHALE	MEDIUM SEEDING	HYDROMULCH	14.9	6.4	25.0	25.0	26.1	16.3
23	NO SHALE	MEDIUM SEEDING	HYDROMULCH	16.4	8.4	23.3	23.3	25.7	15.9
24	NO SHALE	MEDIUM SEEDING	NO MULCH	15.2	6.1	24.9	24.9	31.9	24.0
25	PROCESSED SHALE	LOW SEEDING	HAY MULCH	15.9	7.8	19.2	19.2	24.3	17.2
26	PROCESSED SHALE	LOW SEEDING	HAY MULCH	15.7	8.2	21.8	21.8	24.8	16.7
27	PROCESSED SHALE	LOW SEEDING	NO MULCH	15.7	8.3	23.3	23.3	26.3	16.9
28	NO SHALE	LOW SEEDING	HYDROMULCH	15.4	7.4	23.9	23.9	25.1	15.3
29	NO SHALE	LOW SEEDING	HYDROMULCH	15.7	7.8	26.5	26.5	26.7	16.7
30	NO SHALE	LOW SEEDING	NO MULCH	14.1	4.6	21.3	21.3	26.2	12.7
31	PROCESSED SHALE	LOW SEEDING	NO MULCH	13.9	4.1	22.4	22.4	31.0	22.9
32	PROCESSED SHALE	LOW SEEDING	HYDROMULCH	13.7	6.2	25.0	25.0	25.5	16.3
33	PROCESSED SHALE	LOW SEEDING	HYDROMULCH	15.6	7.0	23.8	23.8	26.2	17.0
34	NO SHALE	LOW SEEDING	NO MULCH	15.7	6.3	24.7	24.7	25.9	15.1
35	NO SHALE	LOW SEEDING	HAY MULCH	16.6	8.4	27.0	27.0	27.7	18.9
36	NO SHALE	LOW SEEDING	HAY MULCH	15.2	8.0	26.2	26.2	29.2	19.4

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - RJ SOIL MOISTURE ANALYSIS

PLOT	SUBSTRATE TREATMENT	SEEDING TREATMENT	MULCHING TREATMENT	MOISTURE READINGS TOP DIR	TOP COR	MIDDLE DIR	MIDDLE COR	BOTTOM DIR	BOTTOM COR
REPORT YEAR= 1995		SAMPLE MONTH= SEPTEMBER							
1	PROCESSED SHALE	HIGH SEEDING	HAY MULCH	12.9	4.1	15.7	15.7	20.2	15.7
2	PROCESSED SHALE	HIGH SEEDING	NO MULCH	11.5	3.9	16.7	16.7	19.9	7.1
3	PROCESSED SHALE	HIGH SEEDING	HYDROMULCH	12.6	4.9	15.0	15.0	16.7	8.1
4	NO SHALE	HIGH SEEDING	NO MULCH	14.5	4.9	22.4	22.4	25.8	11.0
5	NO SHALE	HIGH SEEDING	HYDROMULCH	14.7	8.1	21.0	21.0	21.1	5.6
6	NO SHALE	HIGH SEEDING	HAY MULCH	11.7	4.5	21.0	21.0	29.5	19.1
7	PROCESSED SHALE	HIGH SEEDING	NO MULCH	15.0	6.4	17.9	17.9	26.4	12.0
8	PROCESSED SHALE	HIGH SEEDING	HYDROMULCH	14.9	5.8	17.3	17.3	22.8	12.1
9	PROCESSED SHALE	HIGH SEEDING	HAY MULCH	13.3	5.0	16.2	16.2	22.9	12.1
10	NO SHALE	HIGH SEEDING	HAY MULCH	12.8	5.0	21.6	21.6	22.9	10.0
11	NO SHALE	HIGH SEEDING	HYDROMULCH	14.9	5.8	21.6	21.6	20.6	10.4
12	NO SHALE	HIGH SEEDING	NO MULCH	13.0	6.0	20.1	20.1	28.5	17.4
13	PROCESSED SHALE	MEDIUM SEEDING	HYDROMULCH	12.9	4.0	17.2	17.2	15.5	8.0
14	PROCESSED SHALE	MEDIUM SEEDING	HAY MULCH	13.0	4.6	14.9	14.9	16.3	8.3
15	PROCESSED SHALE	MEDIUM SEEDING	NO MULCH	13.0	4.4	15.3	15.3	23.6	14.9
16	NO SHALE	MEDIUM SEEDING	HAY MULCH	14.1	5.5	19.8	19.8	22.5	12.4
17	NO SHALE	MEDIUM SEEDING	NO MULCH	13.6	6.1	20.1	20.1	25.1	12.2
18	NO SHALE	MEDIUM SEEDING	HAY MULCH	13.3	4.3	20.4	20.4	20.3	20.3
19	PROCESSED SHALE	MEDIUM SEEDING	NO MULCH	12.1	2.0	17.7	17.7	17.6	9.2
20	PROCESSED SHALE	MEDIUM SEEDING	HYDROMULCH	14.3	6.3	17.0	17.0	18.1	17.3
21	PROCESSED SHALE	MEDIUM SEEDING	HAY MULCH	13.1	5.3	17.3	17.3	19.1	16.8
22	NO SHALE	MEDIUM SEEDING	HYDROMULCH	13.8	5.3	22.6	22.6	23.9	14.4
23	NO SHALE	MEDIUM SEEDING	HYDROMULCH	13.9	5.9	19.2	19.2	23.9	14.1
24	NO SHALE	MEDIUM SEEDING	NO MULCH	12.4	3.3	19.6	19.6	21.6	24.6
25	PROCESSED SHALE	LOW SEEDING	HAY MULCH	14.9	6.8	16.8	16.8	22.0	14.9
26	PROCESSED SHALE	LOW SEEDING	HAY MULCH	13.4	5.9	19.3	19.3	20.8	13.7
27	PROCESSED SHALE	LOW SEEDING	NO MULCH	13.7	6.3	20.8	20.8	22.2	12.6
28	NO SHALE	LOW SEEDING	HYDROMULCH	13.3	5.3	18.6	18.6	19.2	9.3
29	NO SHALE	LOW SEEDING	HYDROMULCH	14.5	6.6	22.6	22.6	21.0	13.2
30	NO SHALE	LOW SEEDING	NO MULCH	11.7	2.2	18.3	18.3	24.3	7.7
31	PROCESSED SHALE	LOW SEEDING	NO MULCH	12.2	2.4	18.6	18.6	27.8	12.7
32	PROCESSED SHALE	LOW SEEDING	HYDROMULCH	12.6	5.1	20.5	20.5	24.6	15.9
33	PROCESSED SHALE	LOW SEEDING	HYDROMULCH	12.7	5.1	19.5	19.5	23.5	14.3
34	NO SHALE	LOW SEEDING	NO MULCH	14.0	4.6	20.2	20.2	21.4	10.2
35	NO SHALE	LOW SEEDING	HAY MULCH	14.3	6.1	24.9	24.9	24.7	15.0
36	NO SHALE	LOW SEEDING	HAY MULCH	13.6	6.6	21.6	21.6	24.4	14.3

APPENDIX 6-1.4

Analyses for Plot R-3 Experimental Revegetation Data

Duncan's Multiple Range Test results for significant main effect differences as identified for analyses summarized on Table 6-9

RIO BLANCO OIL SHALE COMPANY
VEGETATION MONITORING PROGRAM
EXPERIMENTAL REVEGETATION STUDIES - R3 COVER

THREE-WAY ANALYSIS OF VARIANCE COMPARING
SUBSTRATE, SEEDING, AND MULCH TREATMENTS
FOR INVADED (NON-PLANTED) SPECIES (SUBPLOTS 4, 5, AND 6)
REPORT YEAR=1985 GROWTH FORM=GRASS

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: COVER
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=20 MSE=.0013837

WARNING: CELL SIZES ARE NOT EQUAL.
HARMONIC MEAN OF CELL SIZES=10.5699

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	MULCH
A	0.043239	17	HAY MULCH
A			
A	0.015668	10	HYDROMULCH
A			
A	0.010417	8	NO MULCH

RIO BLANCO OIL SHALE COMPANY
VEGETATION MONITORING PROGRAM
EXPERIMENTAL REVEGETATION STUDIES - R3 COVER

THREE-WAY ANALYSIS OF VARIANCE COMPARING
SUBSTRATE, SEEDING, AND MULCH TREATMENTS
FOR PLANTED SPECIES (SUBPLOTS 4, 5, AND 6)
REPORT YEAR=1985 GROWTH FORM=SHRUB

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: COVER
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=96 MSE=.0027867

WARNING: CELL SIZES ARE NOT EQUAL.
HARMONIC MEAN OF CELL SIZES=56.8421

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	SUBSTRAT
A	0.069805	60	PROCESSED SHALE
B	0.036894	54	NO SHALE

Duncan's Multiple Range Test results for significant main effect differences as identified for analyses summarized on Table 6-10

RIO BLANCO OIL SHALE COMPANY
VEGETATION MONITORING PROGRAM
EXPERIMENTAL REVEGETATION STUDIES - R3 COVER

THREE-WAY ANALYSIS OF VARIANCE COMPARING
SUBSTRATE, SEEDING, AND MULCH TREATMENTS
FOR THE PLANTED SPECIES (SUBPLOTS 4, 5, AND 6)
REPORT YEAR=1985 SPECIES=ATRIPLEX CANESCENS

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: COVER
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE,
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=11 MSE=.0014219

WARNING: CELL SIZES ARE NOT EQUAL.
HARMONIC MEAN OF CELL SIZES=12.9231

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	SUBSTRAT
A	0.083395	14	PROCESSED SHALE
B	0.046176	12	NO SHALE

RIO BLANCO OIL SHALE COMPANY
VEGETATION MONITORING PROGRAM
EXPERIMENTAL REVEGETATION STUDIES - R3 COVER

THREE-WAY ANALYSIS OF VARIANCE COMPARING
SUBSTRATE, SEEDING, AND MULCH TREATMENTS
FOR THE PLANTED SPECIES (SUBPLOTS 4, 5, AND 6)
REPORT YEAR=1985 SPECIES=CHRYSOTHAMNUS NAUSEOSUS

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: COVER
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=8 MSE=.0021957

WARNING: CELL SIZES ARE NOT EQUAL.
HARMONIC MEAN OF CELL SIZES=10.9565

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	SUBSTRAT
A	0.10705	14	PROCESSED SHALE
B	0.05119	9	NO SHALE

RIO BLANCO OIL SHALE COMPANY
VEGETATION MONITORING PROGRAM
EXPERIMENTAL REVEGETATION STUDIES - R3 COVER

THREE-WAY ANALYSIS OF VARIANCE COMPARING
SUBSTRATE, SEEDING, AND MULCH TREATMENTS
FOR THE PLANTED SPECIES (SUBPLOTS 4, 5, AND 6)
REPORT YEAR=1985 SPECIES=CERATOIDES LANATA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: COVER
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=12 MSE=.0011571

WARNING: CELL SIZES ARE NOT EQUAL.
HARMONIC MEAN OF CELL SIZES=14.9333

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	SUBSTRAT
A	0.066364	16	PROCESSED SHALE
B	0.035508	14	NO SHALE

Analyses of Leachate Produced from Plot R-3,

June 1985

R3-BS = leachate collected below TOSCO II processed shale

R3-AS = leachate collected above TOSCO II processed shale, but below the reconstructed soil profile

CORE LABORATORIES, INC.
ANALYTICAL REPORT

12-JUN-85

RIO BLANCO OIL SHALE CO.

RESULTS OF WATER QUALITY ANALYSIS
ON SAMPLES COLLECTED AT LOCATION:

JOB NO. 6307-	W85260 - 1	W85260 - 2
SAMPLE ID:	R3-BS	R3-AS
SAMPLE REMARKS:		
DATE/TIME SAMPLED	05-02-85/	05-02-85/
DATE/TIME RECEIVED	05-06-85/1100	05-06-85/1100
DATE/TIME ANALYZED	05-06-85/1300	05-06-85/1300
CHEMIST: RIF/DRH		
LOCATION: AURORA, CO		

LAB pH (@ 25 deg. C)	8.26	8.19
LAB COND. (as umhos/cm @ 25C)	799	166

--ALL VALUES REPORTED ON A DISSOLVED BASIS (MG./L.) UNLESS INDICATED OTHERWISE

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitableness of any oil, gas, coal or other mineral, property, well or sand in connection with which such report is used or relied upon

CORE LABORATORIES, INC.
ANALYTICAL REPORT

12-JUN-85

RIO BLANCO OIL SHALE CO.

RESULTS OF WATER QUALITY ANALYSIS
ON SAMPLES COLLECTED AT LOCATION:

JOB NO. 6307-	W85260 - 1		W85260 - 2	
SAMPLE ID:	R3-BS		R3-AS	
SAMPLE REMARKS:				
MAJOR CATIONS				
CALCIUM (Ca)	12	(0.60)	6.2	(0.31)
MAGNESIUM (Mg)	3.1	(0.26)	0.51	(0.04)
SODIUM (Na)	175	(7.61)	24	(1.04)
POTASSIUM (K)	2.8	(0.07)	1.22	(0.03)
SUM OF MAJOR CATIONS (me/l)		(8.54)		(1.42)
SUM OF TOTAL CATIONS (me/l)		(8.91)		(1.59)
MAJOR ANIONS				
BICARBONATE (HCO3)	469.0	(7.69)	82.30	(1.35)
CARBONATE (CO3)	<1	(0.00)	<1	(0.00)
HYDROXIDE (OH)	<0.5	(0.00)	<0.5	(0.00)
SULFATE (SO4)	34.1	(0.71)	12.0	(0.25)
CHLORIDE (Cl)	5.4	(0.15)	5.8	(0.16)
SUM OF MAJOR ANIONS (me/l)		(8.55)		(1.76)
SUM OF TOTAL ANIONS (me/l)		(8.68)		(1.77)

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitableness of any oil, gas, coal or other mineral property, well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.
ANALYTICAL REPORT

12-JUN-85

RIO BLANCO OIL SHALE CO.

RESULTS OF WATER QUALITY ANALYSIS
ON SAMPLES COLLECTED AT LOCATION:

JOB NO. 6307-	W85260 - 1	W85260 - 2
SAMPLE ID:	R3-BS	R3-AS
SAMPLE REMARKS:		

GENERAL PARAMETERS

TOTAL DISSOLVED SOLIDS (CALC.)	459 (474)	77 (93)
*TOTAL ALK. (pH 3.7 as CaCO3)	406	78
*NITROGEN, AMMONIA (NH3-N)	4.80	2.36
*FLUORIDE (F)	2.4	0.2
*SULFIDE (S)	<0.02	<0.02
*ORGANIC CARBON, DIS. (DOC)	19	8

*---FILTERABLE

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitableness of any oil, gas, coal or other mineral, property, well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.
ANALYTICAL REPORT

12-JUN-85

RIO BLANCO OIL SHALE CO.

RESULTS OF WATER QUALITY ANALYSIS
ON SAMPLES COLLECTED AT LOCATION:

JOB NO. 6307-	W85260 - 1	W85260 - 2
SAMPLE ID:	R3-BS	R3-AS
SAMPLE REMARKS:		
DISSOLVED METALS		
ARSENIC (As)	<0.01	<0.01
BORON (B)	0.10	<0.05
LITHIUM (Li)	0.01	<0.01
MOLYBDENUM (Mo)	<0.1	<0.1
SELENIUM (Se)	<0.01	<0.01

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitableness of any oil, gas, coal or other mineral, property, well or sand in connection with which such report is used or relied upon.

Chemical analyses of soil and processed shale collected from Plot R-3 in 1982. Included for comparative purposes with leachate data for June 1985.

R-3 Experimental Revegetation Studies
Soil Chemistry Data

Substrate	Sample Depth (cm)	Sat.%[1]	pH[1]	Conductivity[1] mmhos/cm @ 25°C	Calcium[1] meq/l	Magnesium[1] meq/l	Sodium[1] meq/l	S.A.R.	Organic Matter %
Shale	0	36.4	7.3	0.6	5.4	0.8	1.9	1.1	1.1
Shale	25	41.2	8.1	0.6	3.2	0.6	3.7	2.7	1.0
Shale	50	33.3	7.9	1.0	2.6	0.4	8.9	7.3	0.5
No Shale	0	39.1	7.4	0.5	5.4	0.8	1.2	0.7	1.3
No Shale	25	40.7	7.5	0.5	2.6	0.4	2.7	2.2	1.0
No Shale	50	32.4	8.0	0.8	2.5	0.4	8.3	6.9	0.4
Processed Shale		40.4	8.0	15.8	23.0	135	131	14.7	3.4
Processed Shale		38.8	7.9	14.5	24.0	126	131	15.1	4.3

[1] Saturated Paste Procedure

Substrate	Sample Depth (cm)	Sand %	Silt %	Clay %	Texture
Shale	0	55	30	15	SL
Shale	25	56	29	15	SL
Shale	50	61	28	11	SL
No Shale	0	58	31	11	SL
No Shale	25	59	29	13	SL
No Shale	50	56	31	13	SL
Processed Shale		31	54	15	SiL
Processed Shale		30	55	15	SiL

R-3 Experimental Revegetation Studies
Soil Chemistry Data
(continued)

Substrate	Sample Depth (cm)	Arsenic[1] ppm	Boron[2] ppm	Fluoride[2] ppm	Molybdenum[3] ppm	Selenium[2] ppm
Shale	0	0.020	2.8	1.05	<0.5	<0.010
Shale	25	0.038	3.7	4.50	<0.5	0.015
Shale	50	0.020	3.2	3.45	<0.5	<0.010
No Shale	0	0.006	2.6	0.70	<0.5	<0.010
No Shale	25	0.012	2.2	0.70	<0.5	<0.010
No Shale	50	0.016	4.3	5.5	<0.5	<0.010
Processed Shale		0.324	6.2	27.5	6.0	<0.010
Processed Shale		0.348	6.2	32.7	8.0	<0.010

1 AB-DTPA Extraction
2 Hot Water Extraction
3 Acid-Ammonium Oxalate Extraction

Analyses of Plot R-3 Neutron Soil Moisture Data

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R-3 SOIL MOISTURE ANALYSIS
ANALYSIS OF VARIANCE COMPARING MOISTURE BETWEEN DEPTH PROFILES
AND INDEPENDENT TREATMENTS (SUBSTRATE AND SLOPE) BY MONTH
SAMPLE MONTH=MAY

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: MOISTURE
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=102 MSE=4.37747

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	SLOPE
A	25.453	36	HIGH SLOPE
B	24.433	36	MEDIUM SLOPE
B			
B	23.578	36	LOW SLOPE

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R-3 SOIL MOISTURE ANALYSIS
ANALYSIS OF VARIANCE COMPARING MOISTURE BETWEEN DEPTH PROFILES
AND INDEPENDENT TREATMENTS (SUBSTRATE AND SLOPE) BY MONTH
SAMPLE MONTH=MAY

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: MOISTURE
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=102 MSE=4.37747

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	DEPTH
A	25.458	36	25CM
B	24.117	36	75CM
B			
B	23.389	36	150CM

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R-3 SOIL MOISTURE ANALYSIS
ANALYSIS OF VARIANCE COMPARING MOISTURE BETWEEN DEPTH PROFILES
AND INDEPENDENT TREATMENTS (SUBSTRATE AND SLOPE) BY MONTH
SAMPLE MONTH=JUNE

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: MOISTURE
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=102 MSE=4.73707

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	SLOPE
A	22.881	36	HIGH SLOPE
B	21.372	36	MEDIUM SLOPE
B			
B	20.836	36	LOW SLOPE

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R-3 SOIL MOISTURE ANALYSIS
ANALYSIS OF VARIANCE COMPARING MOISTURE BETWEEN DEPTH PROFILES
AND INDEPENDENT TREATMENTS (SUBSTRATE AND SLOPE) BY MONTH
SAMPLE MONTH=JUNE

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: MOISTURE
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=102 MSE=4.73707

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	SUBS
A	22.124	54	NO SHALE
B	21.269	54	PROCESSED SHALE

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R-3 SOIL MOISTURE ANALYSIS
ANALYSIS OF VARIANCE COMPARING MOISTURE BETWEEN DEPTH PROFILES
AND INDEPENDENT TREATMENTS (SUBSTRATE AND SLOPE) BY MONTH
SAMPLE MONTH=JUNE

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: MOISTURE
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=102 MSE=4.73707

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	DEPTH
A	23.028	36	150CM
B	21.667	36	75CM
C	20.394	36	25CM

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R-3 SOIL MOISTURE ANALYSIS
ANALYSIS OF VARIANCE COMPARING MOISTURE BETWEEN DEPTH PROFILES
AND INDEPENDENT TREATMENTS (SUBSTRATE AND SLOPE) BY MONTH
SAMPLE MONTH=JULY

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: MOISTURE
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=102 MSE=6.07059

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	DEPTH
A	18.981	36	150CM
B	15.161	36	75CM
C	9.764	36	25CM

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R-3 SOIL MOISTURE ANALYSIS
ANALYSIS OF VARIANCE COMPARING MOISTURE BETWEEN DEPTH PROFILES
AND INDEPENDENT TREATMENTS (SUBSTRATE AND SLOPE) BY MONTH
SAMPLE MONTH=JULY

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: MOISTURE
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=102 MSE=6.07059

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	SUBS
A	15.167	54	NO SHALE
B	14.104	54	PROCESSED SHALE

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R-3 SOIL MOISTURE ANALYSIS
ANALYSIS OF VARIANCE COMPARING MOISTURE BETWEEN DEPTH PROFILES
AND INDEPENDENT TREATMENTS (SUBSTRATE AND SLOPE) BY MONTH
SAMPLE MONTH=AUGUST

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: MOISTURE
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=102 MSE=5.87819

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	DEPTH
A	16.878	36	150CM
B	12.408	36	75CM
C	7.236	36	25CM

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R-3 SOIL MOISTURE ANALYSIS
ANALYSIS OF VARIANCE COMPARING MOISTURE BETWEEN DEPTH PROFILES
AND INDEPENDENT TREATMENTS (SUBSTRATE AND SLOPE) BY MONTH
SAMPLE MONTH=SEPTEMBER

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: MOISTURE
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=102 MSE=6.73873

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	SUBS
A	9.5981	54	NO SHALE
B	8.4241	54	PROCESSED SHALE

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - R-3 SOIL MOISTURE ANALYSIS
ANALYSIS OF VARIANCE COMPARING MOISTURE BETWEEN DEPTH PROFILES
AND INDEPENDENT TREATMENTS (SUBSTRATE AND SLOPE) BY MONTH
SAMPLE MONTH=SEPTEMBER

GENERAL LINEAR MODELS PROCEDURE

I DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: MOISTURE
N NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

A ALPHA=0.05 DF=102 MSE=6.73873

M MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

D

DUNCAN GROUPING	MEAN	N	DEPTH
A	13.239	36	150CM
B	8.672	36	75CM
C	5.122	36	25CM

APPENDIX 6-2

Shrub Growth Enhancement Studies

APPENDIX 6-2.1

Shrub Growth Enhancement Studies Data

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
A	1	1	2	2	RHUS TRILOBATA		49	46
A	2	1	2	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
A	3	1	2	2	ARTEMISIA ABROTANUM		18	63
A	4	1	2	2	ARTEMISIA ABROTANUM		23	47
A	5	1	2	2	RHUS TRILOBATA		46	31
A	6	1	2	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
A	7	1	2	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
A	8	1	2	2	ARTEMISIA ABROTANUM		45	100
A	9	1	2	2	RHUS TRILOBATA		83	96
A	10	1	2	2	RHUS TRILOBATA		71	58
A	11	1	2	2	AMELANCHIER ALNIFOLIA		39	25
A	12	1	2	2	ARTEMISIA ABROTANUM		24	54
A	13	1	2	2	ARTEMISIA ABROTANUM		26	63
A	14	1	2	2	RHUS TRILOBATA		2	15
A	15	1	2	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
A	16	1	2	2	AMELANCHIER ALNIFOLIA		14	19
A	17	1	2	2	ARTEMISIA ABROTANUM		27	56
A	18	1	2	2	RHUS TRILOBATA	DEAD	.	.
A	19	2	2	2	RHUS TRILOBATA		36	28
A	20	2	2	2	AMELANCHIER ALNIFOLIA	DEAD	.	.

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
A	21	2	2	2	ARTEMISIA ABROTANUM		24	44
A	22	2	2	2	ARTEMISIA ABROTANUM		26	51
A	23	2	2	2	RHUS TRILOBATA	DEAD	.	.
A	24	2	2	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
A	25	2	2	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
A	26	2	2	2	ARTEMISIA ABROTANUM		22	43
A	27	2	2	2	RHUS TRILOBATA	DEAD	.	.
A	28	2	2	2	RHUS TRILOBATA		57	69
A	29	2	2	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
A	30	2	2	2	ARTEMISIA ABROTANUM		23	62
A	31	2	2	2	ARTEMISIA ABROTANUM		24	66
A	32	2	2	2	RHUS TRILOBATA		29	33
A	33	2	2	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
A	34	2	2	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
A	35	2	2	2	ARTEMISIA ABROTANUM		14	3[illegible]
A	36	2	2	2	RHUS TRILOBATA		39	57
B	1	1	3	2	FALLUGIA PARADOXA		42	58
B	2	1	3	2	ATRIPLEX CANESCENS		19[illegible]	179
B	3	1	3	2	AMELANCHIER ALNIFOLIA		20	17
B	4	1	3	2	RHUS TRILOBATA		28	29

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
B	5	1	3	2	FORESTERIA NEOMEXICANA		57	37
B	6	1	3	2	ROBINEA NEOMEXICANA		60	59
B	7	1	3	2	ATRIPLEX CANESCENS	DEAD	.	.
B	8	1	3	2	ROBINEA NEOMEXICANA		57	54
B	9	1	3	2	FORESTERIA NEOMEXICANA		50	37
B	10	1	3	2	RHUS TRILOBATA		43	47
B	11	1	3	2	ARTEMISIA ABROTANUM		26	42
B	12	1	3	2	ATRIPLEX CANESCENS		101	100
B	13	1	3	2	AMELANCHIER ALNIFOLIA		37	24
B	14	1	3	2	ROBINEA NEOMEXICANA		65	54
B	15	1	3	2	FALLUGIA PARADOXA		76	47
B	16	1	3	2	ATRIPLEX CANESCENS		69	60
B	17	1	3	2	ARTEMISIA ABROTANUM		59	71
B	18	1	3	2	RHUS TRILOBATA		63	51
B	19	1	3	2	AMELANCHIER ALNIFOLIA		65	20
B	20	1	3	2	FORESTERIA NEOMEXICANA		63	43
B	21	1	3	2	ROBINEA NEOMEXICANA		117	94
B	22	1	3	2	RHUS TRILOBATA		60	51
B	23	1	3	2	FALLUGIA PARADOXA		72	94
B	24	1	3	2	AMELANCHIER ALNIFOLIA	DEAD	.	.

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
B	25	1	3	2	ATRIPLEX CANESCENS		79	[illegible]
B	26	1	3	2	FORESTERIA NEOMEXICANA		25	16
B	27	1	3	2	ROBINEA NEOMEXICANA		60	49
B	28	1	3	2	ARTEMISIA ABROTANUM	DEAD	.	.
B	29	1	3	2	ARTEMISIA ABROTANUM		28	53
B	30	1	3	2	FORESTERIA NEOMEXICANA		68	85
B	31	1	3	2	ROBINEA NEOMEXICANA		70	69
B	32	1	3	2	ATRIPLEX CANESCENS	DEAD	.	.
B	33	1	3	2	RHUS TRILOBATA		20	29
B	34	1	3	2	FALLUGIA PARADOXA		75	87
B	35	1	3	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
B	36	1	3	2	ROBINEA NEOMEXICANA		50	55
B	37	1	3	2	ARTEMISIA ABROTANUM		31	63
B	38	1	3	2	FALLUGIA PARADOXA		64	[illegible]
B	39	1	3	2	FORESTERIA NEOMEXICANA		42	58
B	40	1	3	2	RHUS TRILOBATA		25	34
B	41	1	3	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
B	42	1	3	2	ATRIPLEX CANESCENS	DEAD	.	.
B	43	2	3	2	FORESTERIA NEOMEXICANA	DEAD	.	.
B	44	2	3	2	ROBINEA NEOMEXICANA		19	15

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
B	45	2	3	2	ARTEMISIA ABROTANUM		13	42
B	46	2	3	2	AMELANCHIER ALNIFOLIA		20	26
B	47	2	3	2	FALLUGIA PARADOXA	DEAD	.	.
B	48	2	3	2	RHUS TRILOBATA		36	34
B	49	2	3	2	ATRIPLEX CANESCENS	DEAD	.	.
B	50	2	3	2	RHUS TRILOBATA		41	42
B	51	2	3	2	FALLUGIA PARADOXA		39	37
B	52	2	3	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
B	53	2	3	2	ATRIPLEX CANESCENS	DEAD	.	.
B	54	2	3	2	FORESTERIA NEOMEXICANA		72	47
B	55	2	3	2	ROBINEA NEOMEXICANA		47	39
B	56	2	3	2	ARTEMISIA ABROTANUM		21	50
B	57	2	3	2	RHUS TRILOBATA		26	36
B	58	2	3	2	ROBINEA NEOMEXICANA		22	28
B	59	2	3	2	FALLUGIA PARADOXA		71	68
B	60	2	3	2	AMELANCHIER ALNIFOLIA		38	29
B	61	2	3	2	ATRIPLEX CANESCENS	DEAD	.	.
B	62	2	3	2	ARTEMISIA ABROTANUM		13	31
B	63	2	3	2	FORESTERIA NEOMEXICANA		42	37
B	64	2	3	2	FALLUGIA PARADOXA		12	24

FENCE
1=DEER EXCLUDED
3=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
B	65	2	3	2	ARTEMISIA ABROTANUM		25	3[illegible]
B	66	2	3	2	ROBINEA NEOMEXICANA		63	13
B	67	2	3	2	FORESTERIA NEOMEXICANA		72	33
B	68	2	3	2	ATRIPLEX CANESCENS	DEAD	.	.
B	69	2	3	2	RHUS TRILOBATA		33	29
B	70	2	3	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
B	71	2	3	2	RHUS TRILOBATA		8	9
B	72	2	3	2	FORESTERIA NEOMEXICANA		37	58
B	73	2	3	2	ATRIPLEX CANESCENS	DEAD	.	.
B	74	2	3	2	ROBINEA NEOMEXICANA		30	11
B	75	2	3	2	AMELANCHIER ALNIFOLIA		7	[illegible]
B	76	2	3	2	FALLUGIA PARADOXA	DEAD	.	.
B	77	2	3	2	ARTEMISIA ABROTANUM		14	34
B	78	2	3	2	AMELANCHIER ALNIFOLIA		31	31
B	79	2	3	2	ARTEMISIA ABROTANUM		8	22
B	80	2	3	2	ATRIPLEX CANESCENS	DEAD	.	.
B	81	2	3	2	FORESTERIA NEOMEXICANA		59	46
B	82	2	3	2	RHUS TRILOBATA		22	21
B	83	2	3	2	ROBINEA NEOMEXICANA		80	100
B	84	2	3	2	AMELANCHIER ALNIFOLIA	DEAD	.	.

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
C	1	1	3	2	RHUS TRILOBATA		58	7?
C	2	1	3	2	ATRIPLEX CANESCENS		117	130
C	3	1	3	2	FORESTERIA NEOMEXICANA		49	52
C	4	1	3	2	FALLUGIA PARADOXA		88	96
C	5	1	3	2	AMELANCHIER ALNIFOLIA	DEAD	.	
C	6	1	3	2	ROBINEA NEOMEXICANA	DEAD	.	.
C	7	1	3	2	ARTEMISIA ABROTANUM		18	54
C	8	1	3	2	FORESTERIA NEOMEXICANA		63	20
C	9	1	3	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
C	10	1	3	2	ATRIPLEX CANESCENS		93	105
C	11	1	3	2	FALLUGIA PARADOXA		44	30
C	12	1	3	2	ARTEMISIA ABROTANUM		30	53
C	13	1	3	2	RHUS TRILOBATA		34	20
C	14	1	3	2	ROBINEA NEOMEXICANA		116	66
C	15	1	3	2	ATRIPLEX CANESCENS		114	20?
C	16	1	3	2	FORESTERIA NEOMEXICANA		58	28
C	17	1	3	2	AMELANCHIER ALNIFOLIA		37	7?
C	18	1	3	2	RHUS TRILOBATA		??	??
C	19	1	3	2	ARTEMISIA ABROTANUM		43	?1?
C	20	1	3	2	ROBINEA NEOMEXICANA		131	12?

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
C	21	1	3	2	FALLUGIA PARADOXA		67	75
C	22	1	3	2	FORESTERIA NEOMEXICANA		54	40
C	23	1	3	2	AMELANCHIER ALNIFOLIA		48	31
C	24	1	3	2	ATRIPLEX CANESCENS		127	199
C	25	1	3	2	RHUS TRILOBATA		20	15
C	26	1	3	2	FALLUGIA PARADOXA		86	89
C	27	1	3	2	ARTEMISIA ABROTANUM		27	71
C	28	1	3	2	ROBINEA NEOMEXICANA		46	56
C	29	1	3	2	ATRIPLEX CANESCENS		105	152
C	30	1	3	2	FORESTERIA NEOMEXICANA		27	31
C	31	1	3	2	ARTEMISIA ABROTANUM		34	62
C	32	1	3	2	ROBINEA NEOMEXICANA		56	68
C	33	1	3	2	FALLUGIA PARADOXA		31	14
C	34	1	3	2	AMELANCHIER ALNIFOLIA		16	27
C	35	1	3	2	RHUS TRILOBATA		33	45
C	36	1	3	2	AMELANCHIER ALNIFOLIA		11	12
C	37	1	3	2	FORESTERIA NEOMEXICANA		67	52
C	38	1	3	2	ARTEMISIA ABROTANUM		32	31
C	39	1	3	2	ATRIPLEX CANESCENS		84	90
C	40	1	3	2	ROBINEA NEOMEXICANA		97	53

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
C	41	1	3	2	FALLUGIA PARADOXA		53	34
C	42	1	3	2	RHUS TRILOBATA		36	8
C	43	2	3	2	RHUS TRILOBATA		29	16
C	44	2	3	2	AMELANCHIER ALNIFOLIA		20	16
C	45	2	3	2	FORESTERIA NEOMEXICANA		46	31
C	46	2	3	2	ARTEMISIA ABROTANUM		36	80
C	47	2	3	2	ATRIPLEX CANESCENS	DEAD	.	.
C	48	2	3	2	ROBINEA NEOMEXICANA		73	56
C	49	2	3	2	FALLUGIA PARADOXA		62	66
C	50	2	3	2	RHUS TRILOBATA		21	13
C	51	2	3	2	FALLUGIA PARADOXA		45	44
C	52	2	3	2	ATRIPLEX CANESCENS	DEAD	.	.
C	53	2	3	2	ROBINEA NEOMEXICANA		65	47
C	54	2	3	2	ARTEMISIA ABROTANUM		34	71
C	55	2	3	2	FORESTERIA NEOMEXICANA		65	31
C	56	2	3	2	AMELANCHIER ALNIFOLIA		32	32
C	57	2	3	2	RHUS TRILOBATA		47	31
C	58	2	3	2	FORESTERIA NEOMEXICANA		61	38
C	59	2	3	2	FALLUGIA PARADOXA		74	91
C	60	2	3	2	ROBINEA NEOMEXICANA		49	45

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
C	61	2	3	2	AMELANCHIER ALNIFOLIA		18	19
C	62	2	3	2	ARTEMISIA ABROTANUM		41	87
C	63	2	3	2	ATRIPLEX CANESCENS	DEAD	.	.
C	64	2	3	2	FALLUGIA PARADOXA		80	93
C	65	2	3	2	ARTEMISIA ABROTANUM		49	88
C	66	2	3	2	FORESTERIA NEOMEXICANA		81	37
C	67	2	3	2	RHUS TRILOBATA		22	20
C	68	2	3	2	ATRIPLEX CANESCENS	DEAD	.	.
C	69	2	3	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
C	70	2	3	2	ROBINEA NEOMEXICANA		33	37
C	71	2	3	2	ATRIPLEX CANESCENS		77	96
C	72	2	3	2	RHUS TRILOBATA		30	30
C	73	2	3	2	ROBINEA NEOMEXICANA		44	29
C	74	2	3	2	FALLUGIA PARADOXA		51	32
C	75	2	3	2	FORESTERIA NEOMEXICANA		28	21
C	76	2	3	2	ARTEMISIA ABROTANUM		23	44
C	77	2	3	2	AMELANCHIER ALNIFOLIA		17	21
C	78	2	3	2	RHUS TRILOBATA		27	24
C	79	2	3	2	ROBINEA NEOMEXICANA		11	3
C	80	2	3	2	ARTEMISIA ABROTANUM		19	41

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
C	81	2	3	2	AMELANCHIER ALNIFOLIA	DEAD	.	.
C	82	2	3	2	FALLUGIA PARADOXA	DEAD	.	.
C	83	2	3	2	ATRIPLEX CANESCENS	DEAD	.	.
C	84	2	3	2	FORESTERIA NEOMEXICANA		34	29
D	1	1	2	1	RIBES CEREUM (SHORT)		27	23
D	2	1	2	1	RHUS TRILOBATA		34	24
D	3	1	2	1	SHEPHERDIA ARGENTEA (TALL)		34	8
D	4	1	2	1	AMELANCHIER ALNIFOLIA		4	5
D	5	1	2	1	ATRIPLEX CANESCENS		107	155
D	6	1	2	1	ARTEMISIA ABROTANUM		29	36
D	7	1	2	1	FORESTERIA NEOMEXICANA		55	47
D	8	1	2	1	FORESTERIA NEOMEXICANA	DEAD	.	.
D	9	1	2	1	RHUS TRILOBATA		33	22
D	10	1	2	1	AMELANCHIER ALNIFOLIA	DEAD	.	
D	11	1	2	1	ATRIPLEX CANESCENS		104	133
D	12	1	2	1	ARTEMISIA ABROTANUM		26	29
D	13	1	2	1	SHEPHERDIA ARGENTEA (SHORT)	DEAD	.	.
D	14	1	2	1	RIBES CEREUM (TALL)	DEAD	.	.
D	15	1	2	1	RIBES CEREUM (TALL)	DEAD	.	.
D	16	1	2	1	ARTEMISIA ABROTANUM		24	25

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
D	17	1	2	1	FORESTERIA NEOMEXICANA	DEAD	.	.
D	18	1	2	1	RHUS TRILOBATA	DEAD	.	.
D	19	1	2	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
D	20	1	2	1	ATRIPLEX CANESCENS		88	182
D	21	1	2	1	RIBES CEREUM (SHORT)	DEAD	.	.
D	22	1	2	1	ATRIPLEX CANESCENS		91	201
D	23	1	2	1	ARTEMISIA ABROTANUM		28	25
D	24	1	2	1	FORESTERIA NEOMEXICANA		44	17
D	25	1	2	1	RHUS TRILOBATA	DEAD	.	.
D	26	1	2	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
D	27	1	2	1	SHEPHERDIA ARGENTEA (SHORT)	DEAD	.	.
D	28	1	2	1	SHEPHERDIA ARGENTEA (TALL)	DEAD	.	.
D	29	1	2	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
D	30	1	2	1	ATRIPLEX CANESCENS		100	182
D	31	1	2	1	ARTEMISIA ABROTANUM	DEAD	.	.
D	32	1	2	1	FORESTERIA NEOMEXICANA		32	18
D	33	1	2	1	RHUS TRILOBATA		19	11
D	34	1	2	1	RIBES CEREUM (TALL)	DEAD	.	.
D	35	1	2	1	RHUS TRILOBATA		34	25
D	36	1	2	1	AMELANCHIER ALNIFOLIA	DEAD	.	.

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
D	37	1	2	1	ATRIPLEX CANESCENS		106	105
D	38	1	2	1	ARTEMISIA ABROTANUM	DEAD	.	.
D	39	1	2	1	FORESTERIA NEOMEXICANA		38	29
D	40	1	2	1	SHEPHERDIA ARGENTEA (SHORT)	DEAD	.	.
D	41	1	2	1	SHEPHERDIA ARGENTEA (TALL)	DEAD	.	.
D	42	1	2	1	RIBES CEREUM (SHORT)	DEAD	.	.
D	43	2	2	1	SHEPHERDIA ARGENTEA (SHORT)	DEAD	.	.
D	44	2	2	1	FORESTERIA NEOMEXICANA	DEAD	.	.
D	45	2	2	1	RHUS TRILOBATA	DEAD	.	.
D	46	2	2	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
D	47	2	2	1	ATRIPLEX CANESCENS		85	92
D	48	2	2	1	ARTEMISIA ABROTANUM	DEAD	.	.
D	49	2	2	1	RIBES CEREUM (TALL)	DEAD	.	.
D	50	2	2	1	SHEPHERDIA ARGENTEA (TALL)	DEAD	.	.
D	51	2	2	1	ARTEMISIA ABROTANUM	DEAD	.	.
D	52	2	2	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
D	53	2	2	1	ATRIPLEX CANESCENS		122	197
D	54	2	2	1	RHUS TRILOBATA	DEAD	.	.
D	55	2	2	1	FORESTERIA NEOMEXICANA		49	38
D	56	2	2	1	ATRIPLEX CANESCENS	DEAD	.	.

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
D	57	2	2	1	RIBES CEREUM (SHORT)	DEAD	.	.
D	58	2	2	1	RIBES CEREUM (SHORT)	DEAD	.	.
D	59	2	2	1	ATRIPLEX CANESCENS		89	157
D	60	2	2	1	ARTEMISIA ABROTANUM		16	31
D	61	2	2	1	RHUS TRILOBATA	DEAD	.	.
D	62	2	2	1	FORESTERIA NEOMEXICANA		34	16
D	63	2	2	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
D	64	2	2	1	SHEPHERDIA ARGENTEA (TALL)	DEAD	.	.
D	65	2	2	1	FORESTERIA NEOMEXICANA		42	30
D	66	2	2	1	ATRIPLEX CANESCENS		91	182
D	67	2	2	1	AMELANCHIER ALNIFOLIA	DEAD	.	
D	68	2	2	1	ARTEMISIA ABROTANUM	DEAD	.	.
D	69	2	2	1	RHUS TRILOBATA		32	37
D	70	2	2	1	RIBES CEREUM (TALL)		4	1
D	71	2	2	1	FORESTERIA NEOMEXICANA	DEAD	.	.
D	72	2	2	1	RHUS TRILOBATA		25	33
D	73	2	2	1	ATRIPLEX CANESCENS	DEAD	.	.
D	74	2	2	1	ARTEMISIA ABROTANUM		25	55
D	75	2	2	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
D	76	2	2	1	SHEPHERDIA ARGENTEA (SHORT)	DEAD	.	.

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
D	77	2	2	1	FORESTERIA NEOMEXICANA		45	20
D	78	2	2	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
D	79	2	2	1	ARTEMISIA ABROTANUM	DEAD	.	
D	80	2	2	1	ATRIPLEX CANESCENS		118	195
D	81	2	2	1	RHUS TRILOBATA	DEAD	.	.
D	82	2	2	1	SHEPHERDIA ARGENTEA (TALL)	DEAD	.	.
D	83	2	2	1	SHEPHERDIA ARGENTEA (SHORT)	DEAD	.	.
D	84	2	2	1	RIBES CEREUM (TALL)	DEAD	.	.
D	85	2	2	1	RIBES CEREUM (SHORT)	DEAD	.	.
E	1	1	1	1	RIBES CEREUM (SHORT)		42	31
E	2	1	1	1	ATRIPLEX CANESCENS		102	1..
E	3	1	1	1	ARTEMISIA ABROTANUM	DEAD	.	.
E	4	1	1	1	RHUS TRILOBATA		66	75
E	5	1	1	1	FORESTERIA NEOMEXICANA		52	4.
E	6	1	1	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
E	7	1	1	1	SHEPHERDIA ARGENTEA (SHORT)	DEAD	.	.
E	8	1	1	1	RHUS TRILOBATA	DEAD	.	.
E	9	1	1	1	ATRIPLEX CANESCENS		133	207
E	10	1	1	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
E	11	1	1	1	ARTEMISIA ABROTANUM	DEAD	.	.

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
E	12	1	1	1	FORESTERIA NEOMEXICANA		54	17
E	13	1	1	1	SHEPHERDIA ARGENTEA (TALL)		34	21
E	14	1	1	1	RIBES CEREUM (TALL)		65	33
E	15	1	1	1	FORESTERIA NEOMEXICANA		77	33
E	16	1	1	1	RHUS TRILOBATA	DEAD	.	.
E	17	1	1	1	ATRIPLEX CANESCENS	DEAD	.	.
E	18	1	1	1	ARTEMISIA ABROTANUM		53	77
E	19	1	1	1	AMELANCHIER ALNIFOLIA		18	15
E	20	1	1	1	RIBES CEREUM (SHORT)	DEAD	.	.
E	21	1	1	1	FORESTERIA NEOMEXICANA		99	45
E	22	1	1	1	ARTEMISIA ABROTANUM	DEAD	.	.
E	23	1	1	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
E	24	1	1	1	RHUS TRILOBATA	DEAD	.	.
E	25	1	1	1	ATRIPLEX CANESCENS		76	99
E	26	1	1	1	RIBES CEREUM (TALL)	DEAD	.	.
E	27	1	1	1	SHEPHERDIA ARGENTEA (SHORT)	DEAD	.	.
E	28	1	1	1	RHUS TRILOBATA	DEAD	.	.
E	29	1	1	1	ARTEMISIA ABROTANUM	DEAD	.	.
E	30	1	1	1	ATRIPLEX CANESCENS	DEAD	.	
E	31	1	1	1	AMELANCHIER ALNIFOLIA	DEAD	.	.

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
E	32	1	1	1	FORESTERIA NEOMEXICANA	DEAD	.	.
E	33	1	1	1	SHEPHERDIA ARGENTEA (TALL)	DEAD	.	.
E	34	1	1	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
E	35	1	1	1	ATRIPLEX CANESCENS	DEAD	.	.
E	36	1	1	1	ARTEMISIA ABROTANUM		24	50
E	37	1	1	1	FORESTERIA NEOMEXICANA		16	10
E	38	1	1	1	RHUS TRILOBATA	DEAD	.	.
E	39	1	1	1	SHEPHERDIA ARGENTEA (TALL)	DEAD	.	.
E	40	1	1	1	SHEPHERDIA ARGENTEA (SHORT)	DEAD	.	.
E	41	1	1	1	RIBES CEREUM (TALL)	DEAD	.	.
E	42	1	1	1	RIBES CEREUM (SHORT)	DEAD	.	.
E	43	2	1	1	RIBES CEREUM (TALL)	DEAD	.	.
E	44	2	1	1	FORESTERIA NEOMEXICANA		30	11
E	45	2	1	1	RHUS TRILOBATA		35	25
E	46	2	1	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
E	47	2	1	1	ARTEMISIA ABROTANUM	DEAD	.	.
E	48	2	1	1	ATRIPLEX CANESCENS	DEAD	.	.
E	49	2	1	1	SHEPHERDIA ARGENTEA (SHORT)	DEAD	.	
E	50	2	1	1	SHEPHERDIA ARGENTEA (TALL)	DEAD	.	.
E	51	2	1	1	ATRIPLEX CANESCENS	DEAD	.	.

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1985
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
E	52	2	1	1	ARTEMISIA ABROTANUM		21	20
E	53	2	1	1	FORESTERIA NEOMEXICANA	DEAD	.	.
E	54	2	1	1	RHUS TRILOBATA	DEAD	.	.
E	55	2	1	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
E	56	2	1	1	RIBES CEREUM (SHORT)	DEAD	.	.
E	57	2	1	1	SHEPHERDIA ARGENTEA (TALL)	DEAD	.	.
E	58	2	1	1	ATRIPLEX CANESCENS	DEAD	.	.
E	59	2	1	1	RHUS TRILOBATA	DEAD	.	.
E	60	2	1	1	ARTEMISIA ABROTANUM	DEAD	.	.
E	61	2	1	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
E	62	2	1	1	RIBES CEREUM (TALL)	DEAD	.	.
E	63	2	1	1	FORESTERIA NEOMEXICANA		31	14
E	64	2	1	1	SHEPHERDIA ARGENTEA (SHORT)	DEAD	.	.
E	65	2	1	1	ATRIPLEX CANESCENS	DEAD	.	.
E	66	2	1	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
E	67	2	1	1	ARTEMISIA ABROTANUM	DEAD	.	.
E	68	2	1	1	RHUS TRILOBATA	DEAD	.	.
E	69	2	1	1	FORESTERIA NEOMEXICANA		23	9
E	70	2	1	1	RIBES CEREUM (SHORT)	DEAD	.	
E	71	2	1	1	RHUS TRILOBATA	DEAD	.	

FENCE
1=DEER EXCLUDED
2=DEER NOT EXCLUDED

SOIL
1=TOPSOIL COVERING
2=NO TOPSOIL COVERING

SLOPE
1=WATER BAR
2=NO WATER BAR
3=BENCH

RIO BLANCO OIL SHALE COMPANY
SHRUB GROWTH ENHANCEMENT STUDY
PLANT HEIGHT AND DIAMETER DATA

REPORT YEAR = 1995
SAMPLE MONTH = SEPTEMBER

ROW	PLANT NUM	FENCE	SLOPE	SOIL	SPECIES	STATUS	HEIGHT	DIAMETER
E	72	2	1	1	FORESTERIA NEOMEXICANA	DEAD	.	.
E	73	2	1	1	ATRIPLEX CANESCENS	DEAD	.	.
E	74	2	1	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
E	75	2	1	1	ARTEMISIA ABROTANUM	DEAD	.	.
E	76	2	1	1	RIBES CEREUM (SHORT)	DEAD	.	.
E	77	2	1	1	ATRIPLEX CANESCENS	DEAD	.	.
E	78	2	1	1	ARTEMISIA ABROTANUM		20	[illegible]
E	79	2	1	1	FORESTERIA NEOMEXICANA		29	1[illegible]
E	80	2	1	1	RHUS TRILOBATA	DEAD	.	.
E	81	2	1	1	AMELANCHIER ALNIFOLIA	DEAD	.	.
E	82	2	1	1	SHEPHERDIA ARGENTEA (SHORT)	DEAD	.	.
E	83	2	1	1	RIBES CEREUM (TALL)	DEAD	.	.
E	84	2	1	1	SHEPHERDIA ARGENTEA (TALL)	DEAD	.	.

Shrub Growth Enhancement Studies

Soil Moisture Neutron Probe Data

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - SHRUB GROWTH ENHANCEMENTS
SOIL MOISTURE NEUTRON PROBE DATA

REPORT YEAR= 1985 SAMPLE MONTH= MAY

ROW	HOLE NUMBER	FENCE TREATMENT	SOIL TREATMENT	SLOPE TREATMENT	25 CM MOISTURE READING	75 CM MOISTURE READING	150 CM MOISTURE READING
A	1	1	2	2	33.0	31.2	32.1
A	2	1	2	2	24.9	27.0	24.1
A	3	1	2	2	31.7	30.8	33.3
A	4	1	2	2	31.1	30.9	35.1
A	5	2	2	2	30.5	29.8	37.0
A	6	2	2	2	33.0	30.9	30.9
A	7	2	2	2	30.8	32.9	29.1
A	8	2	2	2	29.6	28.2	31.1
B	1	1	2	3	30.0	31.6	29.3
B	2	1	2	3	38.7	32.5	37.1
B	3	1	2	3	27.7	28.0	27.1
B	4	1	2	3	25.1	26.9	31.1
B	5	2	2	3	27.0	30.3	33.2
B	6	2	2	3	38.5	28.5	34.1
B	7	2	2	3	.	.	.
B	8	2	2	3	34.5	28.7	33.1
C	1	1	2	3	30.5	31.1	27.3
C	2	1	2	3	28.6	25.3	30.1
C	3	1	2	3	26.6	29.5	.
C	4	1	2	3	27.3	28.3	35.1
C	5	2	2	3	35.8	31.8	32.7
C	6	2	2	3	29.8	29.6	31.0
C	7	2	2	3	26.1	30.2	34.1
C	8	2	2	3	30.3	27.4	32.1
D	1	1	1	2	19.3	20.1	24.9
D	2	1	1	2	23.6	22.7	.
D	3	1	1	2	18.3	16.4	.
D	4	1	1	2	20.0	19.4	21.7
D	5	2	1	2	22.3	20.2	30.3
D	6	2	1	2	24.7	24.4	31.3
D	7	2	1	2	25.3	21.5	.
D	8	2	1	2	23.8	21.2	23.1
E	1	1	1	1	30.2	36.3	34.1
E	2	1	1	1	33.4	28.6	34.1
E	3	1	1	1	30.9	31.7	32.1
E	4	1	1	1	33.8	37.4	33.1
E	5	2	1	1	34.1	37.4	35.1
E	6	2	1	1	29.8	27.2	31.1
E	7	2	1	1	32.9	32.3	31.2
E	8	2	1	1	30.1	34.2	34.1

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES -- SHRUB GROWTH ENHANCEMENTS
SOIL MOISTURE NEUTRON PROBE DATA

REPORT YEAR= 1985 SAMPLE MONTH= JUNE

ROW	HOLE NUMBER	FENCE TREATMENT	SOIL TREATMENT	SLOPE TREATMENT	25 CM MOISTURE READING	75 CM MOISTURE READING	150 CM MOISTURE READING
A	1	1	2	2	22.3	19.1	[illegible]
A	2	1	2	2	19.4	22.3	[illegible]
A	3	1	2	2	20.2	30.3	[illegible]
A	4	1	2	2	21.4	28.6	[illegible]
A	5	2	2	2	22.3	25.9	[illegible]
A	6	2	2	2	22.9	29.1	[illegible]
A	7	2	2	2	22.8	30.1	[illegible]
A	8	2	2	2	21.6	26.6	38.5
B	1	1	2	3	28.6	30.9	[illegible]
B	2	1	2	3	27.2	24.3	[illegible]
B	3	1	2	3	25.5	29.5	[illegible]
B	4	1	2	3	23.6	26.7	[illegible]
B	5	2	2	3	25.[illegible]	30.7	[illegible]
B	6	2	2	3	32.8	27.[illegible]	[illegible]
B	7	2	2	3	.	.	.
B	8	2	2	3	28.6	28.4	[illegible]
C	1	1	2	3	31.4	31.[illegible]	[illegible]
C	2	1	2	3	21.5	20.8	[illegible]
C	3	1	2	3	22.[illegible]	28.[illegible]	.
C	4	1	2	3	33.2	30.9	[illegible]
C	5	2	2	3	27.7	29.[illegible]	[illegible]
C	6	2	2	3	24.[illegible]	30.2	[illegible]
C	7	2	2	3	23.9	29.[illegible]	[illegible]
C	8	2	2	3	26.6	27.8	29.7
D	1	1	1	2	19.1	22.[illegible]	[illegible]
D	2	1	1	2	18.8	21.7	.
D	3	1	1	2	14.7	15.[illegible]	.
D	4	1	1	2	18.3	18.7	[illegible]
D	5	2	1	2	21.4	19.[illegible]	[illegible]
D	6	2	1	2	21.9	23.6	[illegible]
D	7	2	1	2	22.3	20.7	.
D	8	2	1	2	15.6	19.7	[illegible]
E	1	1	1	1	24.8	33.[illegible]	[illegible]
E	2	1	1	1	23.[illegible]	25.0	[illegible]
E	3	1	1	1	25.4	29.9	[illegible]
E	4	1	1	1	26.0	29.[illegible]	[illegible]
E	5	2	1	1	22.9	29.[illegible]	[illegible]
E	6	2	1	1	22.5	26.[illegible]	[illegible]
E	7	2	1	1	21.1	31.5	[illegible]
E	8	2	1	1	24.3	32.9	[illegible]

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - SHRUB GROWTH ENHANCEMENTS
SOIL MOISTURE NEUTRON PROBE DATA

REPORT YEAR= 1985 SAMPLE MONTH= JULY

ROW	HOLE NUMBER	FENCE TREATMENT	SOIL TREATMENT	SLOPE TREATMENT	25 CM MOISTURE READING	75 CM MOISTURE READING	125 CM MOISTURE READING
A	1	1	2	2	20.0	29.8	32.7
A	2	1	2	2	15.2	16.7	18.3
A	3	1	2	2	19.0	29.6	32.0
A	4	1	2	2	19.3	30.6	34.9
A	5	2	2	2	18.9	29.3	26.3
A	6	2	2	2	19.8	26.5	32.7
A	7	2	2	2	19.0	28.0	28.5
A	8	2	2	2	23.9	27.1	31.0
B	1	1	2	3	28.0	31.7	28.7
B	2	1	2	3	22.4	21.1	27.9
B	3	1	2	3	20.4	26.9	.
B	4	1	2	3	22.6	24.9	22.4
B	5	2	2	3	24.2	31.1	34.7
B	6	2	2	3	30.0	29.5	34.6
B	7	2	2	3	.	.	.
B	8	2	2	3	31.9	28.4	30.6
C	1	1	2	3	30.9	30.7	27.4
C	2	1	2	3	19.7	16.8	16.1
C	3	1	2	3	21.0	27.1	.
C	4	1	2	3	20.3	26.3	35.1
C	5	2	2	3	22.7	30.3	32.7
C	6	2	2	3	18.4	28.7	32.2
C	7	2	2	3	20.3	29.5	33.1
C	8	2	2	3	24.2	28.1	30.5
D	1	1	1	2	17.2	20.2	20.1
D	2	1	1	2	15.7	19.5	.
D	3	1	1	2	12.9	12.5	.
D	4	1	1	2	18.0	19.1	19.3
D	5	2	1	2	21.3	19.1	24.6
D	6	2	1	2	19.2	20.9	30.3
D	7	2	1	2	19.4	17.6	.
D	8	2	1	2	15.1	17.2	22.9
E	1	1	1	1	18.3	28.3	31.1
E	2	1	1	1	18.8	21.2	23.7
E	3	1	1	1	21.7	26.7	33.1
E	4	1	1	1	21.8	23.2	33.1
E	5	2	1	1	21.2	21.6	19.4
E	6	2	1	1	19.5	22.1	22.1
E	7	2	1	1	17.9	30.0	31.1
E	8	2	1	1	21.0	30.8	35.1

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - SHRUB GROWTH ENHANCEMENTS
SOIL MOISTURE NEUTRON PROBE DATA

REPORT YEAR= 1985 SAMPLE MONTH= AUGUST

ROW	HOLE NUMBER	FENCE TREATMENT	SOIL TREATMENT	SLOPE TREATMENT	25 CM MOISTURE READING	75 CM MOISTURE READING	150 CM MOISTURE READING
A	1	1	2	2	20.3	29.1	35.5
A	2	1	2	2	16.4	15.5	17.6
A	3	1	2	2	20.4	29.4	32.2
A	4	1	2	2	21.1	30.2	31.7
A	5	2	2	2	26.7	28.9	32.0
A	6	2	2	2	18.7	26.2	31.1
A	7	2	2	2	19.1	28.7	29.0
A	8	2	2	2	26.0	26.5	31.2
B	1	1	2	3	27.8	31.5	28.5
B	2	1	2	3	23.7	21.5	24.2
B	3	1	2	3	20.5	27.0	.
B	4	1	2	3	22.9	25.7	30.1
B	5	2	2	3	24.9	29.2	30.4
B	6	2	2	3	30.3	27.9	31.1
B	7	2	2	3	.	.	.
B	8	2	2	3	29.7	33.5	31.9
C	1	1	2	3	30.2	30.3	25.5
C	2	1	2	3	27.2	23.3	22.2
C	3	1	2	3	29.0	32.5	.
C	4	1	2	3	25.4	28.8	34.9
C	5	2	2	3	31.5	29.6	33.9
C	6	2	2	3	20.0	28.9	30.1
C	7	2	2	3	23.6	29.3	32.7
C	8	2	2	3	26.1	29.7	34.5
D	1	1	1	2	17.0	20.8	32.3
D	2	1	1	2	19.4	19.8	.
D	3	1	1	2	13.7	12.9	.
D	4	1	1	2	17.5	19.9	19.0
D	5	2	1	2	22.6	22.2	27.7
D	6	2	1	2	20.8	22.1	29.9
D	7	2	1	2	20.2	17.8	34.7
D	8	2	1	2	32.8	20.3	21.4
E	1	1	1	1	19.6	27.9	28.3
E	2	1	1	1	29.0	20.2	21.3
E	3	1	1	1	30.0	25.7	31.3
E	4	1	1	1	27.9	22.9	34.5
E	5	2	1	1	22.7	29.8	33.5
E	6	2	1	1	22.3	31.1	31.1
E	7	2	1	1	28.5	23.3	29.4
E	8	2	1	1	34.5	30.4	34.5

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - SHRUB GROWTH ENHANCEMENT
SOIL MOISTURE NEUTRON PROBE DATA

REPORT YEAR= 1995 SAMPLE MONTH= SEPTEMBER

ROW	HOLE NUMBER	FENCE TREATMENT	SOIL TREATMENT	SLOPE TREATMENT	25 CM MOISTURE READING	75 CM MOISTURE READING	150 CM MOISTURE READING
A	1	1	2	2	19.9	28.7	36.9
A	2	1	2	2	13.4	14.1	14.8
A	3	1	2	2	17.0	28.0	32.4
A	4	1	2	2	16.5	28.8	32.8
A	5	2	2	2	19.0	28.4	37.4
A	6	2	2	2	18.4	25.1	27.2
A	7	2	2	2	17.1	26.9	28.8
A	8	2	2	2	22.2	26.6	31.2
B	1	1	2	3	23.9	30.7	29.4
B	2	1	2	3	18.7	19.6	24.9
B	3	1	2	3	17.6	21.4	.
B	4	1	2	3	21.7	25.1	29.6
B	5	2	2	3	27.9	27.0	36.5
B	6	2	2	3	24.9	28.0	35.2
B	7	2	2	3	.	.	.
B	8	2	2	3	21.1	29.5	32.0
C	1	1	2	3	31.5	30.0	28.9
C	2	1	2	3	24.3	19.9	17.9
C	3	1	2	3	25.0	.	.
C	4	1	2	3	21.5	25.6	34.7
C	5	2	2	3	28.7	30.0	32.7
C	6	2	2	3	23.3	28.7	39.3
C	7	2	2	3	20.7	28.2	32.9
C	8	2	2	3	23.0	28.8	33.9
D	1	1	1	2	17.1	19.6	32.7
D	2	1	1	2	14.7	18.2	.
D	3	1	1	2	11.9	12.0	.
D	4	1	1	2	18.3	17.9	19.1
D	5	2	1	2	22.3	20.8	32.1
D	6	2	1	2	20.7	20.6	26.6
D	7	2	1	2	19.3	16.9	35.5
D	8	2	1	2	22.3	20.5	19.8
E	1	1	1	1	17.6	20.2	25.7
E	2	1	1	1	24.6	18.3	18.6
E	3	1	1	1	27.2	24.0	31.7
E	4	1	1	1	24.1	22.1	31.4
E	5	2	1	1	32.7	25.2	26.1
E	6	2	1	1	24.7	33.0	33.1
E	7	2	1	1	23.7	30.4	34.1
E	8	2	1	1	20.3	31.7	32.9

Appendix 6-2.2

Shrub Growth Enhancement Studies Analysis

Duncan's Multiple Range Test results for
significant main effect differences as identified
for analyses summarized on
Table 6-17

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - SHRUB GROWTH ENHANCEMENT PROGRAM
REPORT YEAR=1985 PLANT SPECIES=ARTEMISIA ABROTANUM

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: PH_PD
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=38 MSE=.0110297

WARNING: CELL SIZES ARE NOT EQUAL.
HARMONIC MEAN OF CELL SIZES=7.31707

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	ROW
A	0.43993	12	C
A			
B A	0.33854	12	A
B			
B	0.31250	4	E
B			
B	0.29250	10	B
B			
B	0.24583	6	D

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - SHRUB GROWTH ENHANCEMENT PROGRAM
REPORT YEAR=1985 PLANT SPECIES=ARTEMISIA ABROTANUM

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: PH_PD
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=38 MSE=.0110297

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	FENCE
A	0.37708	22	1
B	0.30436	22	2

ERROR: MUST HAVE AT LEAST 2 CELLS FOR MULTIPLE COMPARISONS.

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - SHRUB GROWTH ENHANCEMENT PROGRAM
REPORT YEAR=1985 PLANT SPECIES=ROBINEA NEOMEXICANA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: PH_PD
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=21 MSE=.0374949

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	FENCE
A	0.60208	12	1
B	0.33368	12	2

ERROR: MUST HAVE AT LEAST 2 CELLS FOR MULTIPLE COMPARISONS.

Duncan's Multiple Range Test results for significant main effect differences as identified for analyses summarized on Table 6-19

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - SHRUB GROWTH ENHANCEMENT SOIL MOISTURE PROGRAM
MULTIVARIATE ANALYSIS OF VARIANCE

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: TOP
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=162 MSE=20.9151

WARNING: CELL SIZES ARE NOT EQUAL.
HARMONIC MEAN OF CELL SIZES=34.0464

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	ROW
A	27.178	32	B
A			
A	25.700	35	C
A			
A	25.465	40	E
B	22.160	40	A
B			
B	20.259	27	D

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - SHRUB GROWTH ENHANCEMENT SOIL MOISTURE PROGRAM
MULTIVARIATE ANALYSIS OF VARIANCE

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: MID
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=162 MSE=7.74136

WARNING: CELL SIZES ARE NOT EQUAL.
HARMONIC MEAN OF CELL SIZES=34.0464

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	ROW
A	28.166	35	C
A			
A	28.159	32	B
A			
A	28.097	40	E
A			
A	27.600	40	A
B	20.252	27	D

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - SHRUB GROWTH ENHANCEMENT SOIL MOISTURE PROGRAM
MULTIVARIATE ANALYSIS OF VARIANCE

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: BOT
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=162 MSE=13.4075

WARNING: CELL SIZES ARE NOT EQUAL.
HARMONIC MEAN OF CELL SIZES=34.0464

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	ROW
A	31.028	32	B
A			
A	30.865	40	E
A			
A	30.415	40	A
A			
A	30.046	35	C
B	27.219	27	D

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - SHRUB GROWTH ENHANCEMENT SOIL MOISTURE PROGRAM
MULTIVARIATE ANALYSIS OF VARIANCE

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: MID
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=162 MSE=7.74136

WARNING: CELL SIZES ARE NOT EQUAL.
HARMONIC MEAN OF CELL SIZES=20.4

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	NUM
A	28.688	25	1
A			
A	28.483	12	3
A			
A	27.888	17	7
A			
B A	27.628	25	5
B A			
B A	27.356	25	8
B A			
B A	26.776	25	6
B			
B	25.868	25	4
C	21.890	20	2

RIO BLANCO OIL SHALE COMPANY
SPECIAL STUDIES - SHRUB GROWTH ENHANCEMENT SOIL MOISTURE PROGRAM
MULTIVARIATE ANALYSIS OF VARIANCE

GENERAL LINEAR MODELS PROCEDURE

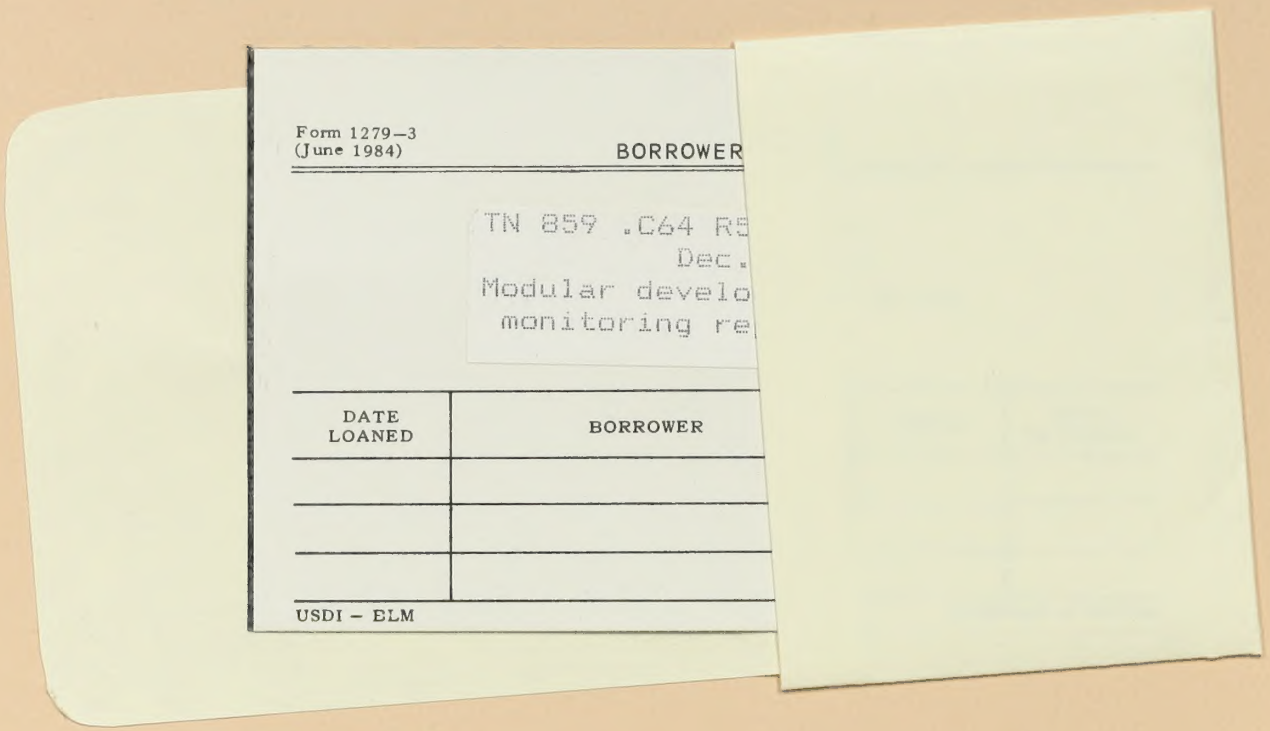
DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE: BOT
NOTE: THIS TEST CONTROLS THE TYPE I COMPARISONWISE ERROR RATE.
NOT THE EXPERIMENTWISE ERROR RATE.

ALPHA=0.05 DF=162 MSE=13.4075

WARNING: CELL SIZES ARE NOT EQUAL.
HARMONIC MEAN OF CELL SIZES=20.4

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

DUNCAN GROUPING	MEAN	N	NUM
A	33.132	25	5
A			
B A	32.183	12	3
B A			
B A	31.576	17	7
B A			
B A	30.896	25	8
B			
B	30.600	25	1
B			
B	30.460	25	4
B			
B	29.856	25	6
C	21.700	20	2


Form 1279–3
(June 1984)
BORROWER
TN 859 .C64 R5
Dec.
Modular develo
monitoring re
DATE LOANED
BORROWER
USDI – BLM